THE FARMERS' CABINET,

Devoted to Agriculture, Horticulture, and Rural and Domestic Economy.

Vol. IV.—No. 10.] 5th mo. (May) 15th, 1840. [Whole No. 64.

KIMBER & SHARPLESS,
PROPRIETORS AND PUBLISHERS,
No. 50 North Fourth Street,
PHILADELPHIA.

Price one dollar per year.—For conditions see last page.

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Just published, by Kimber & Sharpless, Booksellers and Publishers, No. 50 North Fourth street, Philadelphia—Frank, or Dialogues between a Father and Son, on the subjects of Agriculture, Husbandry, and Rural Affairs—by James Pedder, Editor of the Farmers' Cabinet.

DEDICATION.

To the junior members of that most useful class of society, Agriculturists, these Dialogues—the reminiscences of a long life devoted to the pursuits of Agriculture, Horticulture, and Rural Affairs, and in which the characters are real, not fictitious, for there is a Frank and a Sister Susan, a Grabb and a Sykes; the circumstances also having "a local habitation and a name," and the observations and reflections being the result of much experience and investigation—are dedicated, by their very sincere and affectionate friend, James Pedder.

On Blight.

In the Linnean Transactions, (observations on the Apis Fly,) we are taught that "those flies are the principal cause of blight, and the sole cause of honey-dews." Dr. Darwin also espoused implicitly, I have reason to suppose, the same opinion: these positions are, however, in direct opposition to the whole tenor of my observations. The assertion, indeed, that aphides, caterpillars, or any other insects making a prey of trees or plants, may cause them to wither, no observer will deny; but such assertion is as foreign to the general question, as those insects themselves are distinct in their genera to the proper insects of atmospheric blight. The general and well-known affections called blights, are as easily traced by the faculties of sight and feeling, to an atmospheric cause, as any *other* effect whatever, can be traced to *its* cause: the *blight ever precedes the insects*, by a considerable length of time, and the

case is precisely the same with the honey-dews, which ever precedes the insects, and frequently comes, continues, and passes away without their company. Darwin was not aware of the ludicrous dilemma which his hypothesis involved, when he determined the honey-dews to be the excrement of the aphides! This dew oftentimes supervenes, and lines the leaves universally, in the course of a few, or even of one hour, and long *before* the aphides are visible: the excrement, however, of the aphides, as well as other insects, is doubtless, often blended with the honey-dew. To the best of my recollection, I had previously learned from Sherrock, Nales and Miller, "that insects are not the *first* cause of blights, as imagined by some," but I have since discovered, to my entire conviction, that *instead of the insects being the cause of blights, blights are the real cause of insects.*

Similar arguments, deduced from facts of invariable observation through a long course of years, by many competent, and some learned individuals, are fatal also to the analogous hypothesis of Fontena, that "blight in grain is occasioned by the growth of a minute parasitic fungus or mushroom, on the leaves, stems and glumes of the living plant." Now, nothing can be more clear to the attentive observer in the field—his only proper theatre—than that the Italian philosopher's proposition must be *converted*, in order to render it consonant to truth: for the parasitic fungus (to adopt an idea perfectly harmless in any point of view) is assuredly, the *effect*, and not the *cause* of blight; and had not the parasite clung to, and seduced the brains of Fontena, inspiring them with the rage of system and speculative science; and had he substituted a patient and general attention to the meteorological and morbid phenomena of his subject, instead of an elaborate account of pure curiosity and untenable hypothesis, he might have furnished one of pointed, substantial, and practical use.

I know of no particular objection to styling the morbid eruptions on either plants or animals, fungus or mushroom growths; the creeping tetter, scabies or parasite upon the plant may, without any breach of propriety, be so denominated; even the seminal part of the hypothesis—that the fungus propagates its like by seminal generation—may be very easily admitted, and when admitted, will be proved a fact of minor and trifling consequence. Without denying the simple possibility, that the seed of the fungus or scab upon the stalks of grain might infect and produce the disease in other stalks adjoining, common observation teaches us, that such is not in the ordinary course; for we often see fields of grain affected partially, or in stripes, which chanced to stand in the line of the atmospheric stroke; whilst the grain immediately adjoining shall remain to the end totally unaffected; and even one side of an acre shall remain sound, and the other blighted; or the stalk shall be affected, and the ear untouched. The disease—originally caused by atmospheric affection—depends entirely on the *subsequent state of the weather* for its increase, decrease or annihilation; nor are the seeds of the supposed parasite, of the smallest future consequence, since we invariably find that, whether the vegetation of the succeeding year shall be blighted or not, depends simply on the course of the winds and the condition of the atmosphere; and that whatever store of the seeds of the parasite may be supposed to remain after the most blighting season, they are still found perfectly harmless in warm and genial seasons; and after the interval of a number of years of exemption from the malady, one shall suddenly occur, in which the disease shall be epidemic, and its cause, *an atmosphere unfavourably changeable*, so obvious, that if a blind man cannot *see*, he shall be sure to *feel* it. In the interim, what betides the seed of Fontena's favorite parasite plant? Does it remain floating in the air, buried in the earth *beneath*, or in the waters *under* the earth? partially holding itself in readiness to obey the summons of that boisterous Æolus, *East-north-east*, and to nestle in the body, now prepared for its reception, in order to suck up its life-blood! Surely, this is no unapt example of the absurdities into which men voluntarily plunge, when they become determined upon the formation of a *system at any rate*, and whether or not they may have been able to provide the necessary materials for its support.

The dry rot in timber also affords a fine ground for systematic and scientific display: here again, we are all *seed and fungus*, and those *effects*, scientifically thrust into our view as *causes*, so totally absorb our mental vision, that we have not a ray left for the real cause of the malady. Hence, the gainful trade of publishing dry-rot cure by wood doctors, who are furnished with infallible washes to kill or resist the seeds of fungus. Now the downright common sense of the business appears to me to be this—if you have, *internally* and from the foundation, a stagnant vapour, or *externally* unventilated and unabsorbed damps, you will, most probably, grow the vegetable *fungi* of both the dry and the wet rot: replace your rotten timber with sound, if you please; dress it with some of the various washes recommended—little matter which—and the new wood will temporarily resist the rot, or the varnish will destroy the fungus and its seeds, both which, however, will be reproduced in due time by their original cause, *stagnant humidity*: ven-

tilate and keep all dry, and you will radically cure both the rots, the vegetable of which, being transplanted to a dry situation, will perish. Thus, in the case of dry rot in timber, if our *curiosity* be attracted by the generation of the fungus, our *serious attention* ought to be bestowed on those humid exhalations which are its original cause.

The general explication of the terms employed in this subject, which I propose, is as follows:—By *blight*—in Latin, *uredo*—is understood a morbid affection of vegetables from some external cause, by which they are at once withered and destroyed, or suffer a change of colour and gradual decay. *Mildew*—*erysiphe*—is the *mucor* or mould deposited on the surface of vegetables and other substances during the act of evaporation. Mildew is of various colours, and when it appears upon the stalks and ears of grain, and assumes the state and colour of the rust or mould of iron, it is denominated *Rust*—urbigo—and when black, *black rust*. *Brand*, *burnt*, or *blast*—ustilago—is the partial or total disorganization of the ear of grain, so that it may be reduced to powder by the touch. *Red-gum* is a viscous substance, generally exuding from the joints of the stalks, and often found upon the leaves of green grain. *Smut* is the pungent scent of vegetable putridity, issuing from smut-balls or kernels of wheat or other grain, withered, decayed, and in a putrid state; or from entire kernels slightly infected, and contaminated by the putrid material. *Honey-dew* is an unctuous and sometimes sweetish moisture, covering the leaves of trees and plants; it is the usual concomitant of blight. *Curl* or *cling*, is a contraction of the vegetable leaves—one of the most constant and invariable effects of blight; leaves are also curled by the action of caterpillars and other insects, and by stagnant moisture.

Now, it will appear from this arrangement, that although the above terms have been, in the popular way, supposed to denote different diseases, yet, in fact, they are merely the different effects or stages of one and the same disease, namely—*atmospheric blight*;—I repeat, the *atmospheric disease*—nestling and depredations of insects, which we know survive through the winter—the caterpillar most particularly—will cause a sickliness and withering in vegetables, which assumes the *appearance*, and is usually *denominated* blight: this species of blight is, however, of trifling importance when compared with the atmospheric, and is distinguished with the utmost facility by the practised eye. The probable reason for that multitude of caterpillars produced in a blighting season is, that such seasons are usually preceded by a mild winter: hence, the direful ravages of Locusts, Hessian Flies, and various genera of insects in warm climes, or countries within the flights and migrations of winged insects.

But our most material business is, with grain under the influence of blight; and singular enough it is, that in the *general* supposition, wheat alone should be liable! Doubtless, the superior importance of that precious grain has absorbed the public attention; yet every other species of grain, rye, oats, barley, beans, peas, are also liable to the disease in all its forms, although not to be affected by smut in an *equal degree* with wheat. Oats have been, this summer, much affected by *ustilago* or brand, and the smutty scent of the ears gathered in the field has been, occasionally, very pungent: these defects, observed in samples of barley and oats, known by the name of *mow-burnt*, *foxed*, &c. frequently originate in atmospheric disease. *Mildew*, I have observed, may with propriety be divided into two varieties, which, until better terms can be found, may be denominated the dry and the wet—a liberty which I have previously taken with the rot in timber; in truth, there is much analogy in the cases. The dry mildew is that which is brought upon the vegetable surface by the atmospheric stroke or blight, appearing at first like a high blooming blue colour, and even as the harbinger of health and luxuriance, but afterwards progressively degenerating into a plainly morbid but deeper blue; this is the bottle-green, formerly pointed out by various writers as the precursor of smut; and most undoubtedly, so it is. The wet mildew, or the mould of damps, is matter of every one's observation, amongst others, of the bad housewives, who leave their linen to continue for a long time so closely packed together, that it becomes mouldy; but a still more apt example is, the mould of hay, stacked in too moist a state; this mould or mucor is a fungus production from stagnant moisture or humid vapours, and seems to originate in a precipitate from the decomposition of moisture or of humid air, and is seen on the surface of cold and wet land, and of unventilated water; its general appearance is green and mossy, but on some land of a rusty colour. A material of mildew is also under heaps of wet vegetables or in the damp earth, in the form of white filaments, of a strong mushroom smell: thus grain may suffer from the wet mildew even whilst in the grass, if it stand very thick on the earth or be beaten down, and remain wet and unventilated, and is afterwards far more liable to be affected; and continued rains or dews, especially in the autumn, may have the same effect; the vegetable juices becoming chilled, *obstructed*, *stagnant*: hence, according to the

old Boerhaavian style, *error loci*, or extravasation takes place; the eruption puts on the form of discolorations, scabs and blotches, on the stalks of grain, called *rust:* and, to use another old-fashioned term, the vegetable, like the animal body, has *caught cold*, and produced an eruption—a case common to both—and it is in course of nature for this eruption in both cases, to give birth to *pediculi* or *animalculæ*. These insects intercept, exhaust, and vitiate the juices of the plants, as does also the *scabies*, fungus or parasite, whence the ears, deprived of nourishment, are not filled, and even if filled, and the kernels perfect, they almost immediately degenerate into an atrophy or consumption, the crop decreasing in a frightful degree, and the sample rising lean, steely, discoloured, cold in hand, and of a musty swell. There is sometimes, necessarily, a complication of blight and mildew, and a coincidence in the phenomena or effects which are common to both; but the wet mildew may be far more calamitous and fatal than any other disease, from its *universality*, whereas it is the nature of blight and smut to be *partial* in their effects. The mildew prevailed to a most unfortunate extent in Scotland in the year 1799, when, according to my memorandums, we had incessant and cold rains for *full thirteen weeks!*"—*Lawrence's New Farmers' Calendar.*

For the Farmers' Cabinet.

Fruit and Vegetables.

That upon which we feed has an important influence on the disposition and character.

Mr. Editor:—

Travellers inform us that there is no part of the world in which the inhabitants consume so much animal food as in the United States, if we except the Esquimaux and other northern Indians, who live mostly on blubber, bears' grease, and fish. It is observed, that as nations become more civilized and refined, and as the arts and sciences become more extended and improved, and particularly as improvements are made in agriculture and horticulture, the consumption of animal food diminishes, and that vegetable increases. The eating of large quantities of animal food in warm climates, or in warm weather, is admitted by medical men to be decidedly prejudicial to health and longevity; and hence, those who desire to protect themselves from inflammatory diseases should resort to a regimen, consisting of a large proportion of vegetable food. In the neighbourhood of our large commercial cities, in the eastern section of the United States, for twenty or thirty years past, great efforts have been made by industrious and intelligent gardeners, and horticulturists, to improve the quality, to increase the variety, and enlarge the quantity of the vegetables and fruits which constitute part of the food of the inhabitants. In this respect they have been eminently successful, both in promoting their own and the public interests: for it is supposed, that at the present time there is full one-third more vegetable food eaten in proportion to the population, than there was twenty years ago, and consequently, there is a proportionate diminution in the consumption of animal food; at the same time saving expense, and promoting the health of the inhabitants. Gardening, in the neighbourhood of large cities and towns, has long since become a very interesting and profitable trade, giving rise to extensive competition, and, consequently, stimulating those engaged in it to adopt all the most approved modes of rearing, forwarding, and preserving, the most profitable and useful vegetables. It has, therefore, become a matter of vast importance for gardeners to be able to introduce the products of their industry into the market at as early a period in the season as possible, so as to obtain the highest prices for them; ten days or two weeks difference in the time making a large difference in the year's profits. The expedition of transport furnished by steamboats and rail-roads has enabled those who have suitable locations for gardens and truck-patches at a distance, to avail themselves of the advantages of disposing of their produce at prices which brings them into a fair competition with those who are situated near the cities of Philadelphia and New York.

The middle and lower parts of the state of Delaware, near to or on navigable streams, appear to possess advantages admirably adapted to the purposes of cultivating fruits and vegetables for the Philadelphia and more eastern markets. The soil is light and warm, and the climate several weeks earlier than that in the neighbourhood of the city; besides which, the country is underlayed with strata of the best green-sand marl, of the same character as that which has been so extensively used for enriching the soil in New Jersey. A steam-boat has been running during the last season from the neighbourhood of Smyrna and Dover to the city; and if the articles for transportation were increased, boats would increase in due proportion.

The neighbourhood alluded to appears to possess greater advantages for the enterprise of the horticulturist, than any other region connected with the city, and it is understood that there are persons owning sites suitable for the purpose, who design to avail themselves of their natural advantages by cultivating fruit and vegetables for the city market.

Asparagus, early peas, strawberries, and early green corn, all of which can be raised and brought to market two or three weeks before the usual supply arrives from other quarters, might be cultivated to the extent of some hundreds of acres, and sold in Philadelphia and New York at an immense profit; for those markets are never fully supplied with these very desirable refreshments till late in the season. Peaches also present a fair article of traffic from Delaware, and those who have already embarked in their cultivation are understood to have been handsomely remunerated for their enterprise.

If the females in the neighbourhood of Dover and Smyrna would exert but a *small* proportion of the influence which they possess over the men, they would in a few years convert the whole country into a garden. beautiful to look upon, and profitable beyond all comparison with the present mode of occupation. The influence of women in matters of business, and in some other matters, not proper here to touch upon, is much greater than most of them are aware of: and we ardently desire that in relation to this affair, which so intimately concerns the prosperity of their district of country, they will be up and doing. Don't permit the men to sleep over it; start your gardens, and your fruit orchards; let the men of Kent see that you are in earnest; that you intend to have something accomplished, and that quickly; and it will be done, and well done too, for women seldom like to see important business half done.

JAMES BROWN.

March 24, 1840.

Dialogue—Dairying.

Frank.—Father, if you were to describe in the Farmers' Cabinet the way in which you manage your dairy, I think it likely that some persons would consider about it, and take the trouble to try your plan, and see if it would prove more advantageous than their own.

Father.—In that I think you are mistaken. In the business of the dairy there is, I believe, more confidence felt and expressed, than in any other branch of husbandry; every one thinks his own mode of operation the best, and often, without the means of knowing how others perform that branch of their calling, have long determined upon a plan for themselves, which they would feel it very unpleasant and even difficult to relinquish. And you must have observed with what determination our neighbours stick to their own methods, although they see that we always sell out our butter at the market before them, and at an uniformly higher price.

Frank.—I have observed that; and although I last week heard John Ross's mother make the same remark, and wonder how it could be, I am sure she knew why it is, but cannot determine to quit the old method which she has pursued through life. I am led to think about this just now, from the observation which I heard one of our customers make last market day. He was recommending our butter to a friend, and assured him he had kept some of it six weeks, and at the end of that time it was perfectly sweet and good; when his friend said, "Ay, and I have kept it longer than that, and still it is as good as ever." So, I wish you would describe your method, which might be made applicable to our snug little farm of one hundred acres, you know; there are some, perhaps, who would put it into practice, if it were only for the curiosity of the thing.

Father.—Well, if from no better motive, I should be quite content if they would do so, only out of curiosity, for *I, too*, think my own way the best.

But I consider that the business of the dairy commences with the stables in which the cows are kept: these are often placed in some damp and shady situation, for the sake of being near to water, and by this the health of the cows is often very seriously affected,—this is highly improper. The situation of the stables should be dry and airy, and facing a little towards the east, so that the sun might shine full into the door at eleven o'clock; sufficient shelter can be obtained by good high fencing about the yard; and the best water is that which is supplied from a pump in the stable, so that the cows might drink warm water—not iced-water—in the winter, and cool water in the summer, and always get it sweet and clear—an important item in dairying. The approach for feeding should always be at the heads of the cows, and they should stand on a platform, a little sloping, about three or four inches in height, with a wide gutter passing behind them, well paved, along which the dung might easily be swept and conveyed away to the pit, outside the building. Each cow should be furnished with a rack and manger, and a short partition at the head of each forms the best security. The sliding ring on an upright pole, attached to a leather collar and buckle, is preferable to every other mode of tying.

Frank.—Well, this is just the plan of our cow stables, and we know how convenient they are, and how clean our cows are kept during winter, compared with those of our neighbours.

Father.—True; this is the first step in the business: the next is, never to keep a cow in the dairy that is not decidedly profitable; few persons are aware of the immense differ-

ence there is between cows, in the products of the dairy, even when fed and managed in every respect in the same way. A very few unprofitable cows will soon reduce the whole concern to poverty. And I am something amused to read the statements in books, of the profits of a dairy, without the knowledge and experience on the part of the writers, that there is often about one hundred per cent. difference in the value of cows in the same dairy. Now, there is our neighbour, Ross, in general a man of excellent judgment, but, upon this subject, as thoughtless as a child; for he does not, I am sure, obtain from his large dairy half the quantity of butter that we do from ours, while the quality and the price which we obtain are still greatly in our favour. On examination, his cows are, one half of them, worse than useless, for they do not pay for their keep. These are those that he has reared from old favourite cows,* of no value in the dairy; but, as *members of the family*, have been looked up to with veneration for many years, exhibiting all the marks of an unprofitable breed for milk; hardy, perhaps, with a tendency to fatten; and to this purpose they ought to be consigned without mercy. Now, compare these animals with our Judy, Kate, and Nell, from which, as you know, we have, for many weeks past, made twelve pounds each of butter; and who exhibit in their forms every quality of great milkers, namely, the thin and soft skin and hair, light limbs, small head, and thin neck, and above all, narrow loins and rump; for, according to our friend, the Dishly sheep-breeder, this must be a mark of the greatest importance, if, as he says, "When an animal is narrow across the back, the juices flow over it, and settle in the belly, while on a wide and full-grown loin they remain, and go to produce flesh and fat," with udders large and full, and after milking, more like white leather bags to the sight and touch—these are the cows for a dairy, and will pay for *keeping*, but not, even they, for *starving*.

Frank.—But the pure Durhams, of which we hear so much, and which cost so much, too, are very different in their forms, and yet the accounts of their yield of butter and milk are enormous.

Father.—True; they might be called artificial cows, and by treating them artificially, they have been made to perform wonders; but I would not fear comparison with those of ours above mentioned, under the same circumstances—quantity of butter, for food consumed—and there would be a very peculiar difference observable in the quality of the milk and butter of those enormously fat beasts, when compared with that from ours,—extremely rich of course, but with a peculiarity of flavour, and partaking of a meaty consistence, very discernible to a delicate taste—no disparagement, however, is meant; they are noble animals, but, in my estimation, better calculated for the cheese than the butter dairy, and only pay when their keep is high and strong.

Frank.—Then, I begin to see that a great difference in the advantage and profits of a dairy must arise from the kind of cows which are kept, independent of the cost and kind of food which they consume; and I can now understand why it is that our neighbours have remarked the peculiar fragrance of our butter, observable on opening the churn, just as the butter has "come." They have attributed it to the fine pasture of our cows, which, as they remark, being free from weeds, the butter must, of course, be free from bad taste or smell.

Father.—This is, no doubt, the fact, but with a different breed of cows, even this grand and important item would not make all the difference, for it is but natural that the milk of an animal should partake, in a very especial manner, of the juices and peculiar constitution of that animal; and it stands to reason that the produce of a large, fat, *beefy* cow, must be more coarse and strong-flavoured than that of such as Judy, Kate, and Nell, whose very breath is like the newly-mown hay.

Frank.—I have often been astonished to see the cows that are generally kept by our neighbours, when driven into their yards to be milked, and to observe no difference in the size of their udders after the operation, when they are again turned to pasture. I believe that some of them do not produce two pounds of butter each, a week.

Father.—I dare say they do not—but this is only a part of the evil; it is almost uniformly the case, that the milk of cows which yield so little, is inferior in quality, and oftentimes extremely nauseous in flavour, being produced from a different part of the system of the animal than that which is drawn from great milkers; and it is often contaminated with the impurities of that system, drawn off at the time of milking. Now, there are our neighbour Ticey's cows, they are all large and half fat, but when I compare his dairy account with mine, I find they do not yield near the quantity of butter that ours do, and are dry for three months in the year, while you know that ours would never go dry of themselves.

Frank.—Yes, I know that; for you remember that Kate calved within two days of

* Old proverb—"The calf of a young cow, the pig of an old sow," i. e. for the purpose of rearing stock.

our ceasing to milk her, and all the while her milk was perfectly sweet.

Father.—True; and when I have endeavoured to persuade Ticey to exchange his large cows for those of a smaller breed, he has said, "But only calculate their value for fattening, after I have *done with them* in the dairy." "Yes," said I, "three or four years hence; but after I have obtained eight, ten, or twelve pounds of butter per week from a cow for seven or eight years, I can credit her a little on that score, while you *do nothing* with yours for about that time." No man in his right senses will keep a bad milker to rob him of his profit; better sell for almost *nothing*, and buy for almost *any thing*, and keep an account of the profit and loss of the transaction.

Frank.—Well; now for the milk and butter account—I long to come to that.

Father.—And so it seems. But you are forestalling the business; you have forgotten that the cows have not yet been fed and properly attended—two little items in a dairy account, that, insignificant as you might consider them, are, I assure you, of great weight in our future calculations.

And now I consider that I should be at a loss to know how to provide through the winter for a dairy of cows on so small a farm as thirty-two acres arable, were it not for the introduction of the sugar beet into cultivation; that crop has, however, enabled us, as I have said, to do what we wish, and all that we wish; for by proper management, a store of roots might be raised for the full supply of at least two-thirds of the year—from September to May—or longer, if it should be found necessary. Much has been *said and sung* about the best method of preserving them for winter use; nothing is easier, for if they are buried so deep as to be out of the influence of the atmosphere, they might be kept perfectly sound and good for any length of time, and without vegetating. For the purpose of sugar-making, it is quite necessary that fermentation, whether arising from heat or vegetation, should be guarded against; for the feeding of cattle, this is of but little importance; this, however, as well as injury from frost, might be totally prevented by burying deep. To this end, therefore, I would propose to dig a cellar under the cow stables to receive those roots that are to be fed during the autumn and early part of winter; while another cellar, immediately adjoining, and to which access might be had by means of a door from thence, deep and arched with brick, and covered thick with earth, and of sufficient capacity to contain the remainder of the stock of roots, should be formed outside the stables, with a round hole in the crown of the arch, through which the roots might be let down carefully, as they are brought by the carts. This hole should be closed and well covered with earth, as soon as the cellar is filled, and over it a low and slight shed might be built, in which to fodder young stock and sheep.

After the roots in the first cellar—that under the cow stables—are expended, a quantity, sufficient for a week or so, might be taken from the inner cellar, and deposited there for present use; so that the door need not be opened oftener than about once a week, care being taken to block it well with earth, after being properly closed. With such a stock of roots and hay, and cut oats in the straw, no one need dread a winter of any length or severity. It will not be necessary to cut the roots, even for the young cattle or sheep, but an attachment might be made to the threshing mill, if there be one, for cutting the oats; and the same gearing might be used to churn the butter; or a small horse wheel might be erected for these purposes, which would be found a most valuable appendage to the establishment, saving much expense and labour.

And now for the milk and butter—or rather for the milk-house, which it is not indispensable should be erected over a spring, for with my method this is not necessary, as you know. The milk-house must be on the shady or north side of the dwelling, and should be well shaded with trees, with the means of having a thorough current of air when necessary; and during the heat of summer, a current of cold air might be obtained, by means of a bricked arch, or tunnel, running for some distance under the ground, and communicating with the external air in some shaded situation, passing under the wall of the milk-house, and rising by a grated aperture in the centre of the floor. No arrangement might be made for the introduction of water, for—and here is the peculiarity of our method—no water is ever permittted to come in contact with the milk or cream or butter, at any stage of the process. The utensils and every part of the milk-house, shelves, and even the floor, are to be washed clean with hot water and rubbed quite dry, not being left to evaporate the moisture in the dairy, every part being kept as dry as possible at all seasons of the year.

The milk pans, three only in number, made of zinc, after a peculiar pattern, and managed in a peculiar way, according to the method described in the Farmers' Cabinet, p. 91, vol. 4, take but little room in the milk-house, and are found a vast improvement upon the old plan, "for all the cream and none of the milk is obtained in the most convenient manner imaginable, and with an incalculable saving of time and labour." The pump churn,

which we use for 25 or 30 pounds of butter, is of the Welsh pattern, with swelling, not straight, sides; this gives the cream more space, and the agitation is greater and more easily communicated; and when the cream thickens, still there is room for the plunger to work, and consequently the labour is much lessened.

In putting the cream into the churn, it is very customary to wash the cream pans with water, and add it to the cream in the churn; this should be avoided, *as you would avoid poison—not a drop of water must come in contact with the cream or butter, from first to last.* And when the butter is "come," it is customary to pour off a part of the butter-milk, add water, and churn again, to beat the butter together, and in part to wash it; *this is worse still*, for it carries away with it the fragrance of the butter, and gives it a propensity to early rancidity. If the butter requires to be beaten together in the churn, no water should be added on any account, after letting off the butter-milk. On taking the butter out of the churn, it should be beaten, in lumps about two pounds each, on a thick piece of hard and smooth board, with the edges rounded off, held in the left hand, by a knob on the under side, with a flat and thick piece of very smooth, hard wood, with a handle; and on a single trial every one will be convinced that every particle of the milk can be driven out without washing with water. After this, it is to be spread on a smooth board or table, and salted, then rolled together and divided into lumps about a pound each, and beaten again; and it is then fit for the print.

And now, if those who think that the buttermilk cannot be extracted without washing with water, will try the above mode of management and working, and put a portion of the butter away for a month or two, and examine it at the end of that time, they will be quite convinced of a good many things.

Frank.—Is not the island of Jersey famed for good butter? our friend, William I. told us, you remember, that while he resided in Rio Janeiro, they ate Jersey butter, as fresh as though it had been made but the day before: now, how could it be conveyed to such a distance, and into such a hot climate, without becoming rancid and oily?

Father.—I was told of a captain of a vessel who engaged to take butter from the island of Jersey to Rio Janeiro, and that it might be as much as possible out of the influence of the heat of the climate, especially on crossing the line, he placed the barrels containing it at the bottom of the hold of the ship. On arriving at his port, and looking for his butter, he found that not a *drop* of it remained in the barrels! it had all escaped, and was found amongst the ballast, from whence it was removed by means of shovels. The way they now transport it is, to press it, with very little salt, into light barrels, well headed up, and these are then placed in larger barrels, with a coating of salt well rammed in;* they are then carefully headed, and it is found that no heat will penetrate through a covering of salt, even during the longest voyage.

The quality of the Jersey butter arises rather from the delicacy of the breed of cows, than from the food which they eat, for on some of their very small farms the supply is so short, that at certain seasons they are compelled to put up with very coarse fare. The high-bred Durhams show their origin and aptitude for milk and butter, which they inherit from the *Alderneys*, as they are called; although the handsomest and most valuable animals of this breed come from Jersey, an island within sight of those of Guernsey and Alderney, but the breed of its cattle is very different from that of either of them.

The Hog.

Considering his extraordinary fecundity and adaptation to all climates, the ease and cheapness with which he is reared, (thriving almost equally well on animal and vegetable food,) and the facility with which he is conveyed from one place to another, it is indeed surprising that so little is known in this country of his history and habits, and such slight attention paid to the improvement of so valuable an animal as the domestic Hog. To a great extent, among many of our farmers, has the hog been considered as a subordinate species of live stock—a mere consumer of the refuse of the kitchen, whose presence must be tolerated as a necessary evil. The vast improvement to be effected by the importation of new varieties, or judicious crosses among those easily procured, seems to have almost culpably escaped the attention of those with whom the improvement of all other kinds of stock has been a subject of intense and constant reflection. Natural History abounds with singularly minute details of the habits of many rare, and in an agricultural point of view, apparently useless animals. Volumes have been written on the breeds, the treatment, and the diseases of sheep. Treatise after treatise on cattle has been multiplied, exhibiting in detail the change effected by judicious and continued crossings, to so great an extent that the distinguishing characteristics of the parent stock are scarcely to be recognized in their

* Smoked hams may thus be preserved during the summer, if they are packed *quite dry* in boxes of *dry salt*, taking care that they do not come into contact with each other, or with the sides of the box.

descendants; while, with perhaps a solitary exception, little has been offered to the public, calculated to furnish practical information in regard to swine. It is true that now and then we find articles discussing different points connected with these neglected animals, scattered amid the pages of our valuable agricultural periodicals. It is also true, if enjoying free access to books and sufficient leisure, that we can, as the result of prolonged investigations, gather at one time much of interest, regarding the origin and habits of swine as the subjects of Natural History; at another, many facts calculated to aid or govern our estimate of the comparative value of improved varieties; and again, sound practical directions as to the best mode of treatment to secure the utmost limit of perfection. But the attainment of knowledge by a process involving such expenditures of time and research, is impracticable to the many, and sufficiently irksome to the few whose situation authorizes, and whose wishes lead them to attempt it, to excite a deep regret, that instead of scattered truths, and disconnected facts, though important in themselves, no plain, practical, and connected treatise on a subject so important can be found.—*Maine Farmer.*

For the Farmers' Cabinet.

Apprentice by Proxy.

"There is no royal road to Geometry."

Mr. Editor:—

The following authentic anecdote was brought to recollection on reading, in a late number of the Cabinet, "Peter Jones's letter about boys." It shows one among the many ways which are adopted by affectionate but foolish parents, to make boys useless incumbrances, instead of useful members of the community.

Nearly half a century ago, the late W. S., a tanner and currier of Philadelphia, and an eminent minister of the Society of Friends, was travelling in the southern states, where his piety, intelligence, and benevolence of character, caused him to be received and entertained with much hospitality and kindness; and amongst those who manifested their esteem and regard for him was a planter, who had a son that he was desirous should learn the art and mystery of tanning and currying. He proposed sending his son to Philadelphia to be put apprentice to his new acquaintance and friend, to acquire a knowledge of his occupation. Some time after W. S.'s return home from his southern visit, there appeared at his house the youth above alluded to, who had been sent on to enter on his apprenticeship; and accompanying him was a black man, a slave, who was intended to remain with the apprentice boy to do the drudgery and work, while the lad looked on to learn the trade.

The novelty and incompatibility of the arrangement was such as to prevent the intended master from complying with this new mode of teaching a boy a trade, and both he and his labourer were returned from whence they came.

"He that by the plough would thrive,
Himself, must either hold or drive."

O.

To the Editor of the Farmers' Cabinet.

On Breeding in and in.

Sir,—The article at page 267 of the Cabinet for April, is calculated to do much service, both to that work, and to the cause of agricultural science generally. In the first place, there are so many men of celebrity—men of observation and reflection—who can speak from experience on the subject; and their numbers are so equally divided on the *doctrine* of breeding *in and in*, that I doubt not you will obtain many valuable papers from this source, and by them the readers of the "Cabinet" will derive much useful information, *pro and con.* After all, however, we must not expect that the question will be *quite* decided, for from the beginning, you know, doctors have always differed;—this, for myself, I do not deplore, for, as some one says, "truth will bear towzling," and light is elicited from collision.

It is remarkable, however, that the question should be left, at this distant day, so *remarkably* undecided; for if you go over the great names of both parties—men, all of whom profess to have drawn their convictions from experience alone—there will appear such a *balance* in the weight of evidence, as would make a plain man stagger in his faith. Now, there is Sir John Sinclair—a host in himself, is so decidedly opposed to the system of breeding *in and in*, and has made the analogy between the animal and vegetable kingdoms to appear so striking, and reasons so closely, and draws such decisive inferences therefrom, that thousands would as soon think of doubting holy writ, as founder in their faith in Sir John's theories—while Sir Joseph Banks' *experience* was all the other way. There is, therefore, a clear field, Mr. Editor; the combatants are strong and active, well balanced in point of numbers, and the prize is worth contending for—all that they require at your hands is, *no favour.*

I cannot close this, however, without copying from Sir John Sinclair's works a few sentences on the subject, which will, I calculate,

set many persons to *thinking*—and *acting, too* —if I am not mistaken:—

On the subject of breeding, he says: "The art of improved breeding consists in making a careful selection of males and females, for the purpose of breeding stock with fewer defects and with greater perfections than their parents; in which their mutual properties shall be continued, and their mutual faults corrected. The objects of improved breeding, therefore, are to obviate defects, and to acquire and perpetuate desirable properties; hence, when a race of animals have possessed, in a great degree, through several generations, the properties which it is our object to obtain, their progeny are said to be well bred, and their stock may be relied upon. It was upon this principle of selection that Bakewell formed his celebrated stock of sheep, having spared no pains or expense in obtaining the choicest individuals from all the best kinds of long, or combing woolled sheep, wherever they were met with; and it cannot be doubted, that any breed may be improved in the same manner, namely, by putting the best males to the finest females. After a superior breed, however, has been thus obtained, it is a point that has been much disputed, whether it is proper to raise stock, 1st, from the same family; or 2d, from the same race, but of different families; or 3d, from races entirely different." He says afterwards, "On breeding from the same family — this method is called breeding *in and in*, or putting animals of the nearest relationship together; and though this plan was for some time in fashion, under the sanction of Bakewell's authority, *yet experience has now proved that it cannot be successfully persevered in.* It may indeed prove beneficial if not carried too far, in fixing any variety that may be thought valuable, but on the whole, it is only in appearance. Under this system, the young animal comes into the world on comparatively a very small scale; by keeping it fat from the first moments of its existence, it is made to attain a greater size than nature intended; and its weight, in consequence, will be very great, in proportion to the size of its bones. Thus, a generation of animals of an extraordinary form, and saleable at enormous prices, may be obtained, but that does not prove that the practice is eligible if long persisted in: on the contrary, if the system be followed up, the stock becomes tender and delicate; they become bad breeders; and though they retain their shape and beauty, they will decrease in vigour and activity; will become lean and dwarfish, and ultimately be incapable of continuing the race." "Sir John Seabright tried many experiments by breeding *in and in*, with dogs, fowls and pigeons, and found the breeds uniformly to degenerate." "A gentleman, who tried the experiment with pigs, brought them at last into such a state, that the female gave over breeding almost entirely, and when they did breed, their produce was so small and delicate, that they died as soon as they were born." "Mr. Knight's experiments with plants, have fully convinced him, that in the vegetable as well as in the animal kingdom, the offspring of a male and female, not related, will possess more strength and vigour than when they are of the same family, which proves how unprofitable such connexions are." "A change of seed is in general advantageous, in regard both to animals and vegetables; hence, many farmers are induced, not only to change the seed of the kind of grain they cultivate, but to procure males from the flocks and herds of those who have the same, or similar with their own. It has been remarked, that those farmers have, in general, the worst flocks, who breed from rams produced on their own farms, and that an interchange of males is usually beneficial."

Your subscriber,

John Matthews.

Chester County, 29th April, 1840.

For the N. E. Farmer.

Zoology important to Farmers.

A righteous man regardeth the life of his beast.
Solomon.

This language, though uttered many centuries ago, and by one to whom wisdom was granted in compliance with his request, insomuch that he has been reputed as possessing it in a superior degree through all intervening ages, is, nevertheless, by many of our enlightened day, considered as highly figurative, or else, as so far partaking of the mistaken ideas of those old-fashioned times, as to deserve being held in remembrance only as relics of antiquated notions. Hence we see men of every tribe and nation — every sect and party—of all ranks and in all situations — setting aside its injunctions, and treating the animals which Providence has created for their convenience, enjoyment, and as the pioneers of wealth, as though they had actually been placed at their disposal as subjects on which they were to exercise all the rigours of spite and vengeance which their "little brief authority" can command. How strange must the infatuation be, which prompts or tolerates such conduct!

The beasts of the field were evidently created for the benefit of man, and in forms and for purposes adapted to his convenience. "The ox was formed for labour, and much increase is by his strength." The horse, adorned with beauty, is endowed with qual-

ities for speed. And so the chain is filled up with links varying as the variations of his wants require. In return for the benefits which man receives from the beasts at his disposal, he has obligations towards *them*, which if he fail to perform, he is held reprehensible by the moral, and should be by civil law, while at the same time he is suffering pecuniary losses from his negligence towards them, inasmuch as the animal subjects itself to vicissitudes which it does not meet with in a wild and unsubdued state, by becoming his servant. Among these changes may be noticed the liabilities to disease, which we believe, in most instances among the brute creation, arise in consequence of an exchange from a wild to a domesticated state. As long as an animal ranges the fields or forests in native freedom, it is the judge of its own necessities and provider of its own wants. It eats such things as are congenial to its nature, drinks, lies down and rises up when it pleases ;—but when brought under the jurisdiction of "the lord of this lower world," it must obey the injunction of eating "such things as are set before" it—"and learn therewith to be content,"—while in drinks it is often brought under principles of "*total abstinence*," yet sometimes allowed to drink to excess, and this at times when abstinence might be salutary. Fatigue in the animal is often rewarded with the whip, and as its strength decays, the excitements to go forward in its compulsory path are increased. Who can wonder, under such circumstances, that many animals are subject to sickness, and that many, very many, do not "live out half their days." Now, can man be a guiltless being when inflicting cruelties on his beasts, or when placing food before them which is calculated to create disease and pain in them? Justice, mercy, indeed every noble virtue which can warm the breast of philanthropy forbid it. And we, in charity to our fellowmen, believe that they would never be guilty of such outrages upon them, were they not ignorant of their nature, habits, &c.

Hence we infer the utility, if not the necessity, of those interested, making that science which has special reference to them, a part of education.—And first their anatomy. Whoever investigates this science will learn that like ourselves they are "fearfully and wonderfully made," and are admirably adapted to the circumstances in which our convenience may require them. Although they possess a general formation and habits of much hardihood, yet there are delicate springs in their structure which, if roughly touched, will throw the whole machinery out of order. Thus in certain seasons, a moderate rap on the horns of an ox will induce a disease, for which, comparatively, no one can apply an efficient remedy. And it is so through all their varieties, and in all the circumstances through which they are continually passing: they are liable to injuries at all times, and in a variety of ways, which a knowledge of their structure and habits might lead us to prevent. The constitutional habits of the animals which come within the range of man's care, must necessarily be various as the different varieties. The fine sheep of Saxony will not bear the same management as the South-Down, or the "old-fashioned" sheep of our own country. Of course they will not succeed with such management. The difference may arise, to some extent, from change of climate, which may be remedied in a proper way; but there is a habitual and constitutional difference beyond this, which must be closely observed, and its peculiarities regarded, by doing which, not only their health may be secured, but their pacific qualities developed and realized.

Loudon says, that, "of all mammalia, man in a demoralized state is most injurious. The remedy is furnished by law,—preventive, good education, civil and kind treatment." The remarks which apply to man, as far as preventives are concerned, are four-fold applicable to his beasts, inasmuch as the latter never swerve from the habits which education has enforced, and always reciprocate the civil and kind treatment which they receive from their boasting lord and master. The importance of early kindness to domestic animals is fully developed by the growth and the kindness of disposition which, thus early encouraged, characterises them in after years. So an ox which is accustomed to the yoke, even while yet a calf, is broken into his employment with less labour, and makes a firmer and more valuable ox than one whose disposition is unchecked, and whose corporeal form is allowed unrestrained growth for two or three years. He possesses more strength of bone and sinew. These remarks apply also to the horse, and indeed they extend in their proper application to all domestic animals. The cow, which has always been kindly treated, is a gentler, better cow, and of course rewards her owner more liberally. So with the sheep, and even the swinish multitude. The domestic animals do not confine their obligations to kind masters by mere labours of gentleness and servitude; they carry expressions of gratitude in their countenances for all the goodness manifested towards them, and look up to him as their benefactor and friend. In health, they meet our caresses with joy, and in sickness, with looks demanding our compassion, they demand our aid. How great is our ob-

ligation to make them happy, so far as happiness can be theirs, and how guilty if we neglect and abuse them!

But the *domestic* animals are not all which motives of *policy* require should invite the study of the farmer. There are others which, mayhap, partake more of the nature of man, that demand his attention, and which, if left "unnoticed and alone," will enter largely into the blighting of his hopes, and destruction of those things for which he has laboured. The sly, insinuating fox, the wolf, with many others, not excluding those of lesser character, such as squirrels, rats, mice, moles, which build railways with more than human speed through his meadows —weasels, that infest his poultry-yard, &c. &c., — all well enough in their places, but exceedingly apt to get out of their orbit. The invasions of these are to be remedied, and how? By making that acquaintance with their instincts which will subserve the end; not by a long and tedious course of observations—though observations should be as constant as the circumstances which invite to them—but by making their history a subject of investigation, as we do arithmetic and every other study, from "the notes and observation" of others, to whom circumstances have afforded more favourable opportunities to become proficients in these matters than we can expect, with our diversity of cares, to possess.

W. B.

Mount Osceola, March 10, 1840.

Sugar Beet.

Mr. James Pedder:

Sir,—I beg you to accept my thanks for the polite manner in which you favoured me with several articles on the cultivation of the beet, especially for the one contained in the Farmers' Cabinet, drawn up by yourself. I am now more satisfied than I was before of the very great importance to the farmer, and the country, of cultivating this almost invaluable root. I shall use all my influence and exertions in extending its cultivation. I have succeeded in inducing several farmers to enter upon its cultivation the present spring.

With thanks for your kindness, and best wishes for your success in your noble enterprise,

I am, Sir, yours respectfully,

James Kay.

Northumberland, March 31, 1840.

N. B. I had the pleasure of a personal acquaintance with Mr. Samuel Parkes,* with whose establishment you were connected.

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* Author of the Chemical Catechism.

For the Farmers' Cabinet.

Analysis of Limestone.

Mr. Editor:—

The present extended application of lime to land has given rise to various conflicting observations and opinions, in regard to its more immediate effects, though all admit that great benefits ultimately result from its copious application. Most farmers consider lime, as *lime*, without entering into any consideration or examination of the different ingredients, or the different proportions of the ingredients which compose that well-known substance. The difference of composition of lime may, and no doubt does, materially affect the result of its application to land, and produces an effect manifestly variant on different crops; the difference of seasons, as regards heat and moisture; the time of year, and the manner of making the application; as well as the difference of composition, and state of the soil to which it is applied, all conspire to produce results somewhat differing. The quantity applied, and the state of the lime when the application is made, no doubt affect the result very materially; and there may be other circumstances, not here enumerated, which might have an influence in producing different opinions in regard to the good expected to be derived from its application. Every intelligent and observing farmer ought to be attentive to every circumstance connected with the use of so important and valuable an agent in agriculture as lime, and carefully to note down in the "Farm book" every circumstance calculated to throw light on this very interesting subject; and by no means leave important observations to treacherous memory, but put them down in "black and white" while the recollection is perfect, and note particularly all the attending circumstances. In order to ascertain the component parts of the limestone obtained from several different localities, a few years since, specimens were obtained, which were subjected to a rigid analysis, and this was repeated again and again, by an able chemist, in the most careful and accurate manner, and with results but slightly differing from each other. These results are here detailed, in the hope that they may lead to other and more extensive examinations of the limestones used for agricultural purposes in various sections of our country.

The first specimen analyzed was from a celebrated quarry in Montgomery county, Pennsylvania, from the range of limestone that has always furnished the lime for the Philadelphia market, and which has supplied vast quantities for agricultural purposes to an extensive district of country. It corres-

ponds in character with the great limestone range of Bucks, Montgomery, Chester, and Lancaster counties, and, no doubt, that found still farther west presents the same general characteristic marks.

No. 1. Colour, light bluish-grey, with dark streaks, interspersed with small surfaces of crystalline lustre. Lustre, dull. Fracture, in one direction straight, somewhat splintery, in the other, smooth, with a tendency to the conchoidal structure. Very compact; streak, greyish white. Specific gravity 3.028.

ANALYSIS.

Carbonate of lime - - -	57.05
Carbonate of magnesia - -	41.36*
Iron and alumina - - - -	1.80
Silica - - - - - - - -	.73
	100.94

No. 2. A clouded marble from Dager & Potts's quarry, near Spring Mill, Montgomery county.

Colour. It presents irregular interlaminations of dark grey, with white, the whole interspersed with crystalline surfaces. Fracture, irregular. Lustre, the crystals shining, pearly. Structure, compact, granular. Streak, very light grey. Specific gravity 2.646.

ANALYSIS.

Carbonate of lime - - -	96.6
Iron and alumina - - - -	3.6
Black insoluble residuum - -	1.0
	101.2

No. 3. Marble from John R. Thomas's quarry, near Downingtown, Chester county. Texture, granular. Fracture, in one direction roughly conchoidal; in the other irregular, somewhat splintery. Colour, white, with a light shade of grass green. Specific gravity 2.71.

ANALYSIS.

Carbonate of lime - - -	93.40
Carbonate of magnesia -	4.22
Iron and alumina - - - -	1.00
Silica, chlorite, &c. - - -	3.80
	102.42

No. 4. An impure limestone from Joseph Smith's, East Whiteland, Chester county; a surface specimen.

Colour, dark grey, coarsely mottled with white, and exhibiting much talc. Fracture, very irregular. Structure somewhat compact, and (where free from talc) granular. Streak, lead grey. Specific gravity 3.667.

ANALYSIS.

Carbonate of lime - - -	85.30
Carbonate of magnesia -	5.28
Iron and alumina - - -	3.00
Silica and talc - - - -	8.80
	102.38

The above specimens were analyzed by John F. Frazer, during the winter of 1837-38, with great skill and care, and from the number of examinations made there is every reason to believe the results are substantially correct. Some of our farmers are probably not aware that marble is only a finer variety of granular and compact limestone, which, being of a closer grain, is susceptible of a superior polish; and where marble is quarried there is a great accumulation of refuse stone, which may readily be converted into a very pure lime, for agricultural or other purposes. This description of lime *falls much more readily than that burnt from the magnesian limestone*, and when fallen, it has the appearance of coarse sand, which easily slacks by the application of water, when it is reduced to an impalpable powder. It is very desirable that a series of accurate experiments should be made with this description of lime, in order to compare its advantages with that burnt from the common limestone.

Should any of the correspondents of the Farmers' Cabinet possess information calculated to enlighten farmers on the subject of the advantages of the different kinds of lime, they would confer an especial favour by communicating it for public use.

AGRICOLA.

An estimable correspondent suggests the propriety of setting apart a *very large* room in the Patent office at Washington, in which to deposit the numerous machines which have been patented, and found not to answer the end designed. The keeper should be instructed to attach to each a written statement of its defects; and every one applying for a patent should be required to visit this room, and examine its contents, before a patent is granted. He thinks the money saved by this plan, both to the patentee and the community, would soon amount to a very large sum.—*Ed.*

It is said that fresh meat may be preserved free from taint for many months, by keeping it immersed in molasses.

*Every farmer should ascertain the *nature* of his lime before he uses it in agriculture, as there are many extensive districts where the lime is contaminated by magnesia, which renders it *injurious* to the growth of vegetables.—*Parke's Chemical Catechism.*

For the Farmers' Cabinet.

On the Mixing of Corn.

I wish to remark, on an article "On the Mixing of Corn," which was copied into a late number of the Farmers' Cabinet, from the New England Farmer, in which the erudite author, with a heroism deserving of all praise, "differs from all he has read or heard spoken on the subject." "The common opinion (says he) is that the blossom on the top stalk falls on the end of the ear and causes the mixture." This he thinks is "hardly possible" for and because. Catching the prevailing spirit of the times, he then "takes the responsibility on himself," and offers a *new theory*. "My theory—and I believe it to be the true one, is—that there is a silk from the bottom that is next the cob of every kernel of corn; the silk is hollow—a tube, so to express it."

Here the reader will perceive that our ingenious author (like many other *modern* discoverers) has *discovered the old theory*, and not a new one: one, in fact, which has been known to every body but himself for a century. This, however, is a small mistake, and of no consequence to any one but himself. But this *new discovery* of the *old theory*—this maiden effort of his powerful genius—is only the beginning of wonders. For says he, "go into a field with a good glass when this gendering takes place, and I believe there will be seen a vapour—or myriads of vapours—resembling so many spiders' webs, leading in all directions from the top stalks to the ends of the ears. I saw it once with my naked eyes. This, in my poor opinion, is the way in which corn mixes; it is by sympathy, or attraction, or whatever name the learned may call it by." I wonder it did not occur to our observer, that it would be better to lead those *vapours*, or streams of *sympathy*, or cords of *attraction*, or *spiders' webs*, into his silken tubes, and so down to each kernel of the corn; then to land them on the *end of the ear*, as in the exploded theory. But this account he must settle with himself.

Those "good glasses" which render this *sympathy or attraction* visible by transmuting it into real *spiders' webs*, must be an invention of his own. They will no doubt prove an invaluable acquisition to the philosophical inquirer, and must speedily yield us the most prodigious results. But, to come more seriously to the task. The reader who is not acquainted with botanical principles, may be informed that plants are of both sexes. In botanical language, the male parts are called *stamens*—the female *pistils*. Thus in a lily, for example, you will perceive a central column rising in the middle of the cup. This is the *pistil* or female organ. The protuberance at the top is called the *stigma*; the young seed vessel at bottom, the *germ*; and the connecting portion, the *stile*. Around the pistil stand six other erect bodies of about the same height, each bearing on its extremity an oblong body, the *anther*, and covered with a yellow substance, which is the *pollen* or fecundating dust. The pillars which support the *anthers* are called *filaments*. The *anthers* are more properly the male organs. When arrived at maturity, they burst open and discharge the *pollen* or prolific dust, which falls upon the stigma, and through the medium of the stile, impregnates the germ at its base. This arrangement of parts applies only to the lily and a few other plants. It must be recollected, that both the male and female organs of reproduction vary greatly in number and position in the various species of plants, so as to form the basis of the elegant system of classification of Linnæus. In some species the male and female parts are each solitary, or the one solitary, and the other by pairs, or in greater number; in others, there are more than one of each, but the numbers do not often vary in the same species. Sometimes the two sets of organs are on different plants; sometimes in different flowers on the same plant; more commonly they are united in each flower, as I have described in the lily.

The garden strawberry, and the Lombardy and the Athenian poplars, are familiar examples of the male and female flowers being produced by distinct plants. Such plants do not produce fruit unless planted near each other. The female of the lombardy, and the male of the athenian, have never been introduced into this country; hence they do not propagate seed.

In many species, the male and female parts exist in distinct flowers, but on the same plant. As examples, I may mention the hickory, walnut, chesnut—the grasses generally, of which the Indian corn is a notable instance. The tassel on the top contains a profusion of staminate or male flowers, and the silk on the ear consists of as many pistils as there are germs connected with the *receptacle* or cob. Each thread of the silk must receive a portion of *pollen* from the tassel in order to have the germ at its base impregnated. The inconceivable number and minuteness of the particles of pollen which are constantly dispersed over the field for some days, affords the greatest facility for effecting this end. This teaches us how corn mixes, and explains the fact that a mixture may take place as far as the *pollen* is carried by the wind. White and yellow corn may be planted in contiguous fields. The *pollen* from one may be blown upon the

other in such quantity, as to impregnate many of the *germs* producing grains of the description cultivated in the adjoining field. This is the *old theory* of corn mixing, and I believe it is the true one—the correspondent of the New England Farmer to the contrary, notwithstanding.

It is of practical importance that we should understand the true theory of "corn mixing," for the same theory must also apply to the mixing of many other kinds of plants. The squash and pumpkin, the cabbage and turnip, the garden and sugar beet, and the mangel wurtzel, and many other vegetables, are ruined when allowed to blossom and produce seed near each other.

Before concluding these cursory remarks on the mixing of plants, I will address an inquiry to my more intelligent readers, hoping that some will be able to answer it satisfactorily, which I believe has never yet been done.

It seems to be an admitted fact, that when two *varieties* of the potatoe, one red, the other white, are planted in contiguous rows, they will produce piebald roots partaking of both colours. It is not known that any other plants do intermix in the root. The *old theory* teaches us how the *seeds* produced from potatoes so circumstanced, may propagate mongrels; but a *new theory* which will account for this *mixture in the root*, remains to be a desideratum to the botanical physiologist. The principle which is referred to in the relation of Jacob's peeled rods, is inapplicable to the present case; for although the potato has many *eyes*, it cannot *see*; yet, like the flocks of the good old patriarch, it produces ring-streaked and spotted roots. Will some of your able correspondents be so good as to *clear up* this matter, either by giving us a satisfactory explanation of the process, or showing that it is only one of Dr. Franklin's fishes?

A Noviciate.

We have received, through the kindness of a friend, a delightful little work on the Horse, which contains in a few pages the substance of a large volume. It is a recent London publication, and we shall feel pleasure in laying its contents, from time to time, before our readers.

The Horse.

The contents of the following pages are the results of long practical experience, and have been written with a view to the benefit of persons not thoroughly practised in the proper management of horses, and to whom the knowledge now imparted may be useful. To men of business in particular, whose time is too much occupied to admit of leisure for much study, beyond their every-day pursuits, the present work may afford information not so easily acquired in other forms. A few minutes devoted to the perusal of it will probably compensate them for their trouble, as the whole is comprised in a small compass. It will be found that the entire treatment of the horse, that is, the useful, or road horse, is fully considered in the subsequent pages. The publishers, also, are not ashamed to confess, that one part of their object has been to induce greater humanity than is usually practised in the treatment of so noble an animal; and it is melancholy to reflect, that the "high-mettled racer," in the words of the song, is not unlikely to become "food for the hounds." But those who are not susceptible of the finer feelings of our nature, may be influenced by considerations of self-interest; and it would not only evince humanity, but it would be a pecuniary gain, if the owners of horses paid more attention than they usually do, to that kindness of treatment which is dictated by nature herself.

In all nations and in all ages, the horse has been esteemed as one of the noblest and most valuable animals of the brute creation. It is unnecessary for the object of the present work to make any particular allusion to the pride and admiration in which he was held in ancient Greece and Rome, and indeed among every warlike people. Caligula invested his horse with the dignity of a first consul. Innumerable passages might be quoted from the poets, descriptive and illustrative of the qualities of this beautiful quadruped; but we shall confine ourselves, in this introductory matter, to a citation from the Book of Job. The following verses are so applicable to our subject, and so sublime in conception and expression, that it would be almost an unpardonable omission not to lay them before the reader, who need not be told that the apostrophe is to the Deity.

"Hast thou given the horse strength; Hast thou clothed his neck with thunder? Canst thou make him afraid as a grasshopper? The glory of his nostrils is terrible. He paweth in the valley, and rejoiceth in his strength: he goeth on to meet the armed men. He mocketh at fear, and is not affrighted; neither turneth he back from the sword. The quiver rattleth against him, the glittering spear and the shield. He swalloweth the ground with fierceness and rage; neither believeth he that it is the sound of the trumpet. He saith among the trumpets, Ha, ha; and he smelleth the battle afar off, the thunder of the captains and the shouting."

Such is the description given in holy writ of this superb animal; but it is now our task to treat of all that relates to the use of him, in a plain and familiar style, adapted to all capacities.

The value of horses mainly depends upon their soundness and capability for work. It is, therefore, of the utmost importance to keep them in the most healthy condition. Yet, this being universally allowed, it is a constant and general complaint that so few of these valuable animals are preserved in a proper state. But it is surprising that those who so complain do not perceive that the blame principally rests with themselves, as the remedy lies solely in their own hands, so far, at least, as any remedy can be applied. There can be no doubt that persons who employ horses wish to get all the work they can from them, without decreasing their value; but that they do not effect this desirable object is evident from the prevalence of the complaints made upon the subject. The general employers of horses, more particularly men of business and commercial men, seem to think that a knowledge of the horse is implanted within them by nature; and this overweening confidence leads them into an infinity of errors, and prevents them reading what better-informed persons have said upon so important a topic. Nor do such persons take even common precautions in the treatment of these animals, by attending to experience or example; but they trust the care and health of their horses to ostlers and others who have but a secondary interest in preserving them in good condition. It is only fair, however, to admit that the little benefit derived by persons keeping or entrusted with horses from works already published regarding their treatment, may be partly owing to the expensiveness, or voluminousness, of such treatises, requiring either more money or time than it may be convenient to afford for that purpose. To which may be added, that hitherto there has not been a single work issued from the press of general and complete utility on this subject.

Here, then, the reader may ask, What am I to do? I take every possible care of my horse; he has abundant food; yet he is not what I could wish him. Another may say, —I do not think great feeding good for the health of a horse, from an idea that too much food causes broken wind, or from an apprehension of bringing on inflammatory disorders. To go through the reasons, pro and con, that people might urge in vindicating each his own particular mode of treatment of the noble animal subject to their charge, would be a mere waste of words. Ask them to explain why they do this or that, and although they may give you an answer perfectly complacent to themselves, they never succeed in making converts of others. Hence it is apparent that their judgment is not based upon any rational foundation. To correct erroneous opinions on this interesting question, to qualify horses to work with ease to themselves, and also to contribute to the pleasure of their owners, constitute the intent and object of this little tract.

That horses ought to remain sound, and would do so, to a much later period of life than is the fact at present, will, it is hoped, be demonstrated in the course of these pages. That everything animate must decay by the progress of time, is an axiom too trite to be dwelt upon; but trees, or men, may decay prematurely for want of proper culture; and so may horses. Transplant a tree to an uncongenial soil, or situation, and it will cease to thrive; or it may perish through some injury to the roots; or from other causes operating against the laws of nature; whereas under different circumstances, it might continue to prosper much longer. The writer of this remembers the grief of a friend at the decline of an ornamental and valuable timber tree, in consequence of his driving a large spike nail into the trunk, not thinking at the moment it would do the least injury. In another instance, a person, in order to improve his grounds, raised a bank of earth around some elm trees, which, to his astonishment and regret, died. So it is with men and other animals: climate, soil, situation, and the nature of their employments, have the most important bearings upon their health, soundness, and capacity for usefulness.

Our present object, therefore, is to recommend the most judicious method of treating the horse, with the view of correcting false notions and of increasing the value of that beautiful animal. Analogy will show us that this project is not so impracticable as many persons might imagine. The gardener has brought many tender plants from the East to flourish, even in the rigour of a northern winter. The Ethiopian will live in Greenland; the Laplander in Africa; but they would pro-

bably not do so, without due attention to the change thus made in place and circumstance. It is science that is their instructor.

Morgan, in his Treatise on Horsemanship, published about two centuries back, tells his readers to "put one bottle of sherry into a pint of water, as the ordinary drink of a horse, with much bread. The blood being derived from horses originally brought from the East, the wine is necessary to keep up the heat of blood required in this country." This treatment would now be laughed at as injurious; and it is to be doubted whether the grooms of those days did not appropriate the greater portion of the wine to their own share, and no less to the advantage of their horses.

Finding, then, that not only man, but birds and flowers, as well as many things, intended perhaps less for use than ornament, are capable of undergoing mutations of various kinds, it would be folly to suppose that animals adapted and given to man for his necessities, are not capable of similar changes without detriment to their strength and constitution. It is true, that, like the plants before alluded to, those animals would degenerate without proper care; but the all-seeing Providence that has so bountifully provided these "creatures to our uses," has also endowed us with reasoning faculties, so as to enable us to reap the full advantage from them. Although it is impossible to prevent the infirmities of age, it is at all events in our power to avoid or protect the beasts of the field, sent as they are for our good, from wanton or inconsiderate ill-treatment. Much of their present sufferings, without any maudlin sensibility, might be alleviated by the diffusion of more knowledge on the subject amongst persons who ought to feel interested in such matters. It is our duty to use, not abuse, the creatures made for our service, and for that purpose to avail ourselves of any means best calculated to prolong their existence. Such must be in fact the wish of every reflecting man, who keeps, in particular, a horse, or horses, not only from feelings of humanity, but also for the sake of profit; and we may feel assured that in all cases the best and wisest policy is to treat a horse with kindness and gentleness. The tendency to act wrong in this respect proceeds less from hardness of heart than from the absence of competent knowledge upon the subject, as we have already hinted, the mass of information concerning it being spread over, or scattered through, so many extensive works, that few people have leisure for the perusal of them.

Every man has in his own life follies enough—in his own mind, troubles enough—in the performance of his duties, deficiencies enough, without being curious after the affairs of others.

Haymaking.

To the Editor of the Farmers' Cabinet.

Sir,—As the season for haymaking is near at hand, I feel desirous of bringing your numerous readers acquainted with a *practice*, which is based on so true a *theory*, that—as ought always to be the case—they go hand in hand to the end of the chapter. As so much of the happiness of the farmer depends on the stock of hay which he can prepare for his winter consumption, any information, tending to facilitate the process, and at the same time lessen the labour and expense and hazard of the business, I consider of great importance. The following observations, reflections and instructions, are therefore presented to their notice, by their friend and well-wisher

Jonah Corbit.

N. J., 1st May, 1840.

"Having observed, that in a season where there was no rain whatever, and the hay had been made with rapidity, and carried within a short time after it had been cut, that a greater quantity had been injured by being over-heated and burnt, than in a catching, irregular season; that when hay had not heated in the stack, it was frequently mouldy; that as hay lost its native green colour and approached a brown, it lost its nutritive qualities; and that, altogether, the making of hay, as usually conducted, was a very precarious and troublesome operation; I determined on trying to arrange a system on more regular and certain principles, and in which I succeeded: and by adopting a certain and regular course of operations, was enabled to make my hay of a uniform good quality; and, let the weather be as it might, at a pretty regular expense for labour, and considering such a process not only of importance, as it insures a more perfect quality, but as it affords a more certain protection against the injuries usually consequent on the uncertainty of the weather, and over-heating in the stock, and that it thus removes two great causes of anxiety, it may be well worth the public attention.

In the first place, then, as to the state of the weather—it generally happens at this season of the year, that there are three or four rainy and three or four dry days;* therefore, on beginning to cut the grass, as it is well known that grass may be cut and suffered to remain in the swarth for several days without injury; and it being desirable, where hands are plenty, to have a good quantity, or as much as will complete a stack in a day, in the same state of forwardness, I should prefer, rather than to wait for fine weather,

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* In England.

to begin to cut in rainy weather. However, be this as it may, the swarths should not be opened but on a fine day, and when this is done, the grass should be well shaken apart and equally spread over the ground; and as soon as the upper surface is dry, turn it well over, and in this operation great care should be taken to open and spread any cocks that may not have been divided in the first opening: this being done, commence raking into wind-rows in time, that the whole may be made into small cocks before the night. *The second day these cocks must remain untouched, let the weather be wet or dry.* The third day, if the weather be certain and fine, throw the cocks open; but if the weather be wet or threatening, they may remain another day, or until the weather is certain to be fine for the day. The cocks should then be thrown, according to the crop, into beds of two or three rows, and after three or four hours exposure, turned over, and taking time to gather the whole into wind-rows and cocks before night; let this operation commence accordingly, and *none be left open.* The day after this, which in fine weather will be the fourth, *the cocks must again remain untouched, or not be opened, whether the weather be wet or dry.* On the fifth, or the next dry day, these cocks will only require to be opened for an hour or two, after which time they will be fit for the stack.

The novelty of this mode, consists only in suffering the hay to remain in cock the second or third, or alternate days; and at first sight it may appear that so much time in fine weather must be lost, but this is by no means the case, for whilst the hay remains in cocks, a slight fermentation, or what is termed sweating, will take place; and in consequence, after it has been opened on the third and fifth days, it will prove to be just as forward as if it had been worked every day; and the advantages resulting from this, are obviously the following:—By shortening the time of open exposure, the colour of the hay is more perfectly preserved, and consequently, the quality; and the fermentation or sweating which takes place in the cocks, proves so much to have diminished the principle or inclination, as to prevent its heating injuriously in the stack; and the whole operation of making, whether it takes four days or eight, requires three days' labour only; and the hay being left in that state every night, in which it is the least possibly exposed to the injuries of the weather, and in which it may remain for a day or two in uncertain weather, without injurious exposure, most painful anxiety and useless attendance of labours are obviated."

Hayward's Science of Agriculture.

An Agent's Suggestions.

To the Proprietors of the Farmers' Cabinet.

I congratulate the friends of the Cabinet on the change of proprietorship of that very useful work; it will now go on and prosper. The arrangement which has been made for the editor—a practical farmer—to visit the country in his official capacity, is the best that could be devised, and is exactly that which was adopted by the "Albany Cultivator;" and had it not been for the sudden death of its excellent editor, it is the conviction of all its friends, that infinite good to all parties would have been the result.

I am, and have been, from the time of its commencement, one of the agents of the Cabinet; and living in a district surrounded with a number of excellent farmers, all of whom will, I trust, now become subscribers, I have the means of knowing what would be required to make it, not only a general, but an universal favourite with the agriculturists throughout the country. The price, I know, is low, but that is no reason why the book should not be continued at the present price; nor is it anything against its becoming still more valuable in its arrangements, both in the matter as well as the manner; and in the hands of its present proprietors and publishers, I trust it will so become—depending upon its great sale for remuneration, just as the bible and other standard works are now furnished, and at a profit too, for less than it would be possible to issue them without a circulation of tens of thousands. Allow me, then, to speak my sentiments candidly, and with the sincere desire to promote the circulation of a publication on a subject which requires only to be known, felt, and understood, to rally round it the *warm hearts and right hands* of the agricultural community generally—individually.

In the *first place*, then, let its appearance be punctual as the promises of a *friend*: this, I am convinced, is not a difficult arrangement; for suppose the day of publication be as heretofore, on the 15th of the month—I dislike the word, *about*—it looks suspicious; well, then, let this day to the publishers be the 12th; there then is exactly the same interval to them, from the 12th of one month to the 12th of another, in which to prepare for the publication, and then every farmer would obtain his book at the time specified,—a matter of more moment than almost any one would imagine; for often have I known of late, that when the subscribers have called upon me for their numbers, coming from a great distance for the purpose, they have declared their determination to quit taking it, it was so irregular in its publication,—ob-

serving, if they cannot get it at the time specified, the taste for it passes away, and before they have it again in their power to call, they care nothing about it. 2d, *Paper*. This ought to be thick and good; for if the Cabinet becomes so great a favourite as I *intend*, it will be read, not only by the farmer, but by his wife and family also—and not only read, but *examined*, and unless the paper is good and strong, it will soon become in an unfit state for binding at the end of the year, —an object of much importance, as my wish is, to form of it an agricultural library and book of reference; and to that purpose the subscribers may look with confidence, now that the work is in the hands of men, "who are as willing as they are able, to make it a work worthy of the state and the country."

Matter.—The observation expressed by the editor, that "the people of this country would prefer to know rather how their neighbours in other parts are doing, than of these countries, where the soil, climate, and circumstances are so different," is good; and, with the understanding that this is not to deprive us of the knowledge of what is *really valuable* from foreign sources, has met with universal approbation: it must not, however, be forgotten, that practical agriculturists are capable of digesting strong food—real practical knowledge and information, drest and served up in a plain way, with but little of the garnish—this is what they prefer, and for which they have a relish, and would *rather take than leave*—that is the criterion. My wife and daughters, however, the latter of whom are of an age to read and understand, remind me, that I promised to put in a word for them; they believe there is room, if the super-garnish be left out, to admit a little of that sort of lighter food, which would be more palatable to the female portion of your readers,—a new class, perhaps, but which, if I mistake not, will be found henceforth to be pretty numerous: and they hope that poetry of the best and purest kinds, *very small* in quantity, and not foreign to the character of the work, will sometimes find its way into your pages. And I must add, I trust the time is coming when, if the farmer has not leisure to read the Cabinet, it will not be found lying on the window or bookshelf uncut, till the next month, but that the wife and daughters will feel so far interested, as to cut and stitch it into paper covers, ready for his use, when he retires to his arm-chair, after the labours of the day. But let me just whisper,—my wife thinks that the wives of farmers generally, ought to be supposed able to make johnny-cakes and molasses gingerbread, without printed instructions in the Farmers' Cabinet.

Manner.—Little and often, as all good farmers say; and upon this principle it is that I take upon me to say—and this I do from observation—Farmers in general like best those articles which treat on subjects in a plain and concise manner, in *short*—for it must be said—they like *short articles*; they suit the reading of the general class of agriculturists, who have often not time or inclination to peruse a long article, even if to their interest so to do; and the preference for short articles may be traced in almost every one, who will admit that *they* at least are read *first*, while the sight of "To be continued," is a poser to most, who, despairing of knowing where to take up "the thread of the discourse," decline entering upon the subject at all. Now, this is not meant in disparagement of essays of any length on important subjects generally—by no means—it is only intimated that such are better calculated for the pages of standard works relating to their particular subjects, rather than to those of a periodical newspaper, consisting of 32 pages only, monthly. It has been said, nothing is more difficult than to cater for the public taste; I dare say it is difficult, but that is no reason why it should not be done; but in an agricultural work, the *taste* of its readers is very much the same, and confined pretty much to the same dishes, and this narrows the difficulty much: one thing is quite certain, all have a relish for real practical knowledge; and if a farmer has experienced the disappointment of his hope, in realizing a large return from extra management, there is not a farmer, far or near, who will not enter into the subject, and listen attentively while he records the circumstance from end to end; this might be termed "weeping with those who weep," while the account of enormous crops from peculiar management, stating time, place, and circumstances, would be sure to *interest* every one, and this would be "rejoicing with those that do rejoice,"—proof positive of good fellowship.

Embellishments.—I see it advertised that engravings will be given on suitable occasions; and for once, I believe that the readers of the Cabinet have fair grounds to expect that the promise will be redeemed: they, it must be admitted, have of late been wofully disappointed in their expectations in this particular, and I have sometimes wondered how they have submitted so quietly; but such quietness is often the worst sign of disease. I would, therefore, respectfully propose to the proprietors to make the Cabinet, in this particular, "a thing to be coveted." I would place it by this, and every other means, beyond the possibility of competition. There is a grand field open, and they ought to take possession of it. They could give us real portraits of the horse, cattle, sheep, hog,

&c., in all their *native varieties*, and engraved in such a style as would be creditable to themselves, and to the work, especially if it were known that the individuals were *real portraits*—not mere prints; this is of the greatest importance, and would, I am convinced, bring to the ranks of its subscribers tens of thousands; and I would suggest that at the foot of each print be placed the name of the particular breed, and it may sometimes happen, notice of the *individual* also. From the plates of these, may be struck off prints of the different animals, male and female, which might be disposed of as engravings for ornamenting the house of the farmer, every one of which would act the part of an "agent," and of the best kind too, in procuring an addition to the subscription list of the "Cabinet;" engravings of agricultural implements, architectural drawings, entomology, &c., might also follow at intervals.

Now, I am aware that to carry this plan into execution, will require energy, and *capital*, without which the energetic spirit alone would be but of little avail; fortunately, however, we are assured that both these requisites are in the possession of the present proprietors, and it is only for the agriculturists to determine to make the work *their own*, and the subscription list will soon render easy the most sanguine wishes and the highest expectations of its friends. Respectfully,

J. S.

Gloucester County, N. J.

Root Culture.

If the representations made by the friends of root culture are to be relied on, a great change is to be made in our crops by it. Some say these things do very well for the "little truck patches" of the North, but 'tis all idle for a large farmer to think seriously of making roots a part of his crop. This may be so, but if, with the same labour or more, an acre of ground can be made to yield in roots thrice the quantity of food for cattle that it produces in grain, the "truck-patch" cultivators will soon become the most prosperous, if not the largest landholders.—All are aware of the value of succulent food for stock in the winter season, particularly the young and milch cows. Look at the effect of our early rye pastures upon every thing that feeds upon them. Our cattle are fed in winter upon food which has lost much of its nutritive matter, and the juices of the rye pastures are very nourishing to them. It is very essential to the full perfection of cattle that they should be constantly fed upon food of this character. The superior keep of the English cattle is from their roots. The process of drying, to which much of our common winter food is subjected, takes away a large quantity of nutritive matter, and nearly all that water which certainly enters largely into this nutritive matter. In England, grapes lose in weight by drying 66 to 70 parts out of the 100, in this country more, 70 to 75 out of 100. Roots retain their juices, and if they can be raised successfully, must form an admirable substitute for green grasses. It may be that turnips do not answer a valuable purpose here—they may be uncertain; we have known two hundred bushels gathered from half an acre in this county, with no more labour than was applied to a corn crop; and though they have some seasons failed entirely, in places, yet not ten miles off good crops have been made by others the same year. We would not recommend to any one to do more than make an experiment upon an acre or two. We have great confidence in the value of the sugar beet, and are pleased to learn that a number of judicious farmers in our county intend to plant from one to three acres this season. Carrots are cultivated in some parts of the country, particularly for colts, and are very highly esteemed.—*Franklin Farmer.*

The Stream of Death.

There is a stream, whose narrow tide,
The known and unknown worlds divide;
Where all must go;
Its waveless waters, dark and deep,
'Midst sullen silence downward sweep,
With moanless flow.

I saw where, at the dreary flood,
A smiling infant prattling stood,
Whose hour was come;
Untaught of ill, it neared the tide,
Sunk, as to cradle rest, and died,
Like going home.

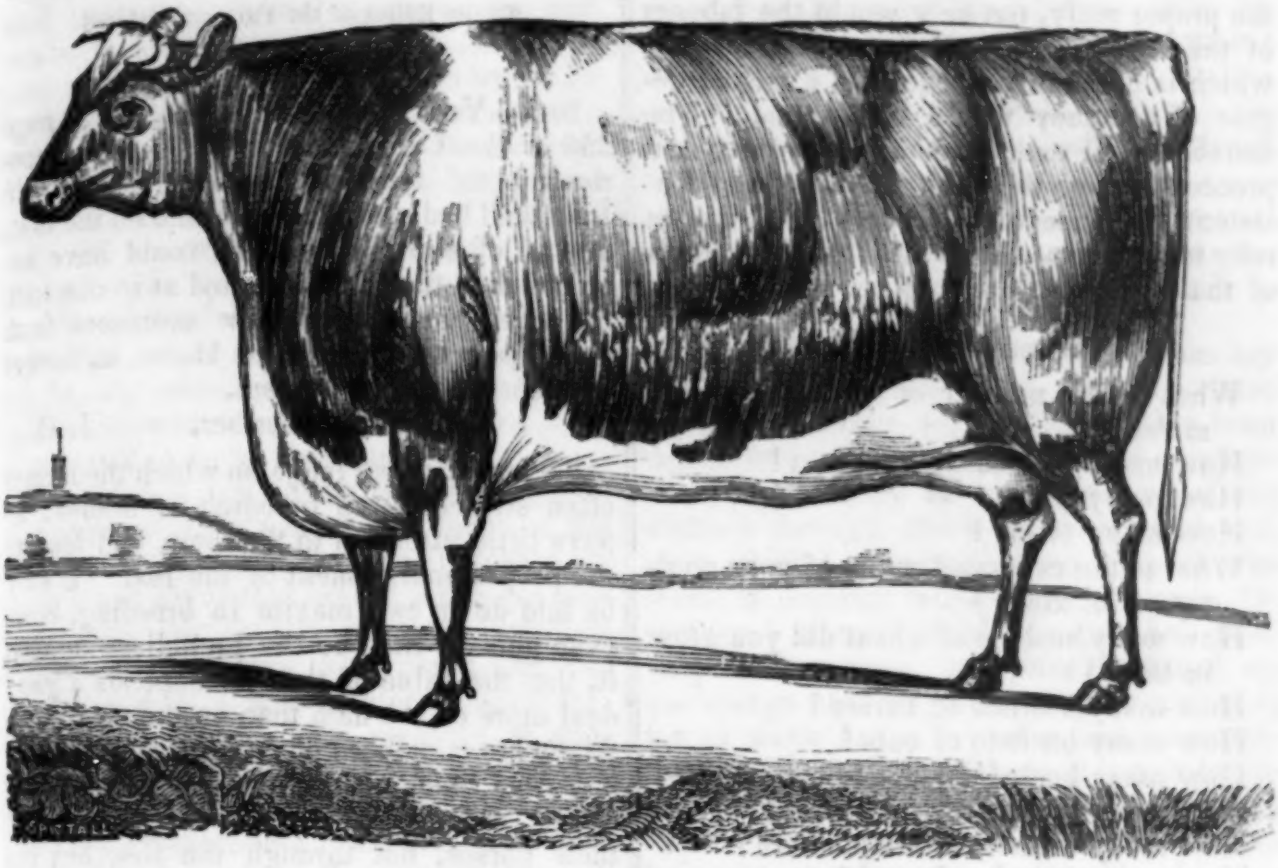
Followed, with languid eye, anon,
A youth diseased, and pale and wan;
And there alone
He gazed upon the leaden stream,
And feared to plunge—I heard a scream,
And he was gone.

And then a form in manhood's strength,
Came bustling on, till there at length
He saw life's bound;
He shrunk, and raised the bitter prayer
Too late—his shriek of wild despair
The waters drowned.

Next stood upon that surgeless shore,
A being bowed with many a score
Of toilsome years;
Earth-bound and sad, he left the bank,
Back turned his dimming eye, and sank,
Ah! full of fears.

How bitter must thy waters be,
O death! How hard a thing, ah, me!
It is to die!
I mused—when to that stream again
Another child of mortal man,
With smiles, drew nigh:—

"'Tis the last pang," he calmly said—
"To me, O Death! thou hast no dread;
Saviour, I come;
Spread but thine arms on yonder shore—
I see!—ye waters, bear me o'er!
There is my home!"



MISS POINTS,

By Aid-de-Camp. Calved in 1823. *Bred by C. Champion, Esq.*

The above engraving is an excellent Portrait of the high-bred Durham "Miss Points." It is the intention of the Proprietors of the Farmers' Cabinet, periodically to enrich its pages with portraits of other individuals of the same breed, as well as those peculiar to the breeding counties of England and Scotland; as also the Horse, in all his varieties, Sheep, Hogs, &c. as circumstances shall permit.

Agricultural Census.

We congratulate the agricultural community on the approaching census, and join in the hope that every farmer in the country will be ready and willing to assist in the important work which is to give a mass of information of the highest importance to all classes of the community. The following we copy with much pleasure from the Cultivator:

We are happy to perceive that this important subject has been taken up in the proper quarter, and that we are at last to have such an enumeration of the agricultural products of this country, as will furnish some safe estimate of the quantity produced, and the districts in which they are grown. In reply to some suggestions made by us on this subject, Mr. Deberry, the chairman of the committee of agriculture, has kindly forwarded us a copy of the instructions for the use and direction of the marshals and their assistants, from which we find that the following series of inquiries are to be propounded to every farmer. Although there are some products that would be perhaps desirable to render it complete, yet it contains all the most essential items, and if carried out in the spirit in which it seems to have been conceived, it will be a collection of vast importance and value to the country. Had such a census of our agriculture been taken every ten years, the comparison of the tables at different times, would be of the greatest interest, as determining the increase in the product of our friends, and the districts in which the greatest fluctuations have taken place.

We have one suggestion to make in regard to this matter, which we consider of very great importance. It is this: Let every printer of a newspaper in the country, and all in the cities that print journals for distribution in the country, give a place to the questions which we copy below, and which will be propounded to every farmer in the United States. As it is to be hoped that there are few or no farmers who do not receive some journal agricultural or otherwise, such a course would be the means of bringing the subject to their notice, and enable them to prepare their answers with greater correctness than they might otherwise be able to do. If every farmer who receives a copy of these interrogatories, would at his leisure sit down, and write against each one

the proper reply, not only would the labours of the marshals be greatly expedited, but, which is of more consequence, a greater degree of accuracy would be secured. The marshals will commence in June next, and proceed through their districts as soon as consistent with accuracy. The interrogatories refer to the crops of 1839, and to the products of that year must the answers relate.

AGRICULTURE—INTERROGATIONS.

What is the number of your horses and mules?
How many neat cattle have you?
How many sheep?
How many swine?
What is the estimated value of your poultry of all kinds?
How many bushels of wheat did you grow in 1839?
How many bushels of barley?
How many bushels of oats?
How many bushels of rye?
How many bushels of buckwheat?
How many bushels of Indian corn?
How many pounds of wool?
How many pounds of hops?
How many pounds of wax?
How many bushels of potatoes?
How many tons of hay?
How many tons of hemp and flax?
How many pounds of tobacco?
How many pounds of rice?
How many pounds of cotton have you gathered?
How many pounds of silk cocoons?
How many pounds of sugar?
How many cords of wood have you sold?
What is the value of the products of your dairy?
What is the value of the products of your orchard?
How many gallons of wine have you made?
What is the value of your home-made or family goods?

As intimately connected with these, may be added those relating to horticulture—which are as follows:

What was the value of the produce of your market gardens in 1839?
What was the value of the produce of your nursery and green house?

It is hoped that editors friendly to the cause of agriculture, or who have readers in the agricultural districts, will give a place to the above interrogations, and invite the attention of those interested, that they may be in readiness with their replies. Let the first effort for an agricultural census of the United States, be met in a manner that shall insure the desirable accuracy of the measure.

To the Editor of the Farmers' Cabinet.

Dam the Best.

Sir,—Your correspondent, G. B., at page 256 of the Cabinet, is right. I have experienced the truth of the observation, "If Bakewell had commenced with dam the best, instead of sire the best, he would have accomplished the end he aimed at in one half the time," and I copy a few sentences from a very popular work on the Horse, as farther corroboration of the axiom.

Your Subscriber, J. D.

"There are two rocks on which the farmer often strikes in the breeding of horses: he pays little attention to the mare, and less to the proper nourishment of the foal. It may be laid down as a maxim in breeding, however general may be the prejudices against it, that the value of the foal depends a great deal more on the dam than on the sire. The Arabs are convinced of this, for no price will buy from them a likely mare of the highest blood; and they trace back the pedigree of their horses, not through the *sire*, but the *dam;* and the Greeks, long before the Arab horses were known, held the same opinion. "What chance of winning have I?" inquired a youth, whose horse was about to start on the Olympic course. "Ask the *dam* of your horse," was the reply, founded on experience. The farmer, however, too frequently thinks that any mare will do to breed from, for if he can find a great prancing stallion with a high-sounding name, *and loaded with fat*, he reckons on obtaining a valuable colt, and if he fail, he attributes the fault to the horse, and not to his own want of judgment—far more depends on the mare than is dreamt of in his philosophy."

For the Farmers' Cabinet.

Seasoning of Wood.

A constant reader of the Cabinet is led to make a few remarks and enquiries on reading the article at page 292 of the present month, "on the seasoning of wood by the means of fire," a subject which he considers of much importance.

1st. He wishes to inquire, whether it is not *the external pressure of the atmosphere* which renders fresh cut wood, when submitted to the action of the fire for seasoning, more compact, harder, and of course heavier, than it can become by air or water seasoning.

2d. And if it be so, is not the most proper season for cutting timber for this purpose when the sap is in full flow, as it is then most abundant, less glutinous, and more readily evaporated; and the vessels which contain it being softer and more easily ope

rated upon by external pressure, the contraction would be greater, and the exhaustion more complete, leaving no space by which the external air can re-enter: the sap-vessels being, as it were, *crushed* by the pressure, the wood would thus be rendered impervious either to air or moisture.

3d. He would ask, whether there would be any benefit, in submitting wood that had already received air or water seasoning to the action of the fire for that purpose? the sap having already been dissipated, and the vessels become too dry, hard, and rigid, to be operated upon by such means.

4th. Will it not appear to the advocates of summer-cutting timber, that much of the benefit derived arises from the influence of the sun and air at that season when the heat is greatest, and by which a more complete exhaustion of the sap takes place, than can be obtained in a cold winter atmosphere; this heat operating, in a measure, as does the firing, causing internal evaporation and external pressure, great, in proportion to the heat of the atmosphere? the bark from such timber being removed the instant it is cut, exposing it more immediately to its influence.

It would be easy to construct drying kilns for fire seasoning; they might be built of common masonry, deep, round or square, with iron pipes instead of bars near the bottom, on which for the boards, &c., to rest on their butt ends: these pipes, projecting through the sides of the kiln, and placed so as to radiate to the internal centre, like the spokes of a wheel, and open at both ends, would create a rush of hot air, which, united with the heat arising from the fire immediately beneath, would cause an evaporation, and consequent pressure, equal to an immense force, and do the business most expeditiously and effectually.

Your Subscriber,

JOHN JENKS.

Bucks County, 28th April, 1840.

Would our intelligent friend, and valued correspondent, Captain James Cooper, of Haddonfield, oblige us with his opinion on this important subject?—*Ed.*

Pay as you go.

To deal for ready money only, in all the departments of domestic arrangement, is the truest economy. Ready money will always command the best and cheapest of every article of consumption, if expended with judgment; and the dealer who means to act fairly will always prefer it.

Trust not him who seems more anxious to give credit, than to receive cash. The former hopes to secure custom by having a hold upon you in his books; and continues always to make up for his advance, either by an advanced price, or an inferior article; whilst the latter knows that your custom can only be secured by fair dealing. On this point, however, every one's experience will convince him.

To the Editor of the Farmers' Cabinet.

Corn Stalks.

SIR,—I take up my pen to redeem my promise. Since my former letter, I have travelled towards the South, and have been struck with the different modes of management practised by the agriculturists of the districts through which I have passed, and upon which I propose to speak somewhat in order, as occasion might offer. In some instances I have been highly gratified with what I have seen, and have treasured up knowledge that might be of great utility to me on some future occasion, and have verified the observation, "There is something to be learnt in every country," while at the same time I must say, in others there may be some amendment. And nothing has appeared to me more deserving the general notice of the farmers of this country, than the universal custom of permitting the stalks of the last year's crop of corn to remain upon the land, to the great injury of the present crop, and the inconvenience at the time of the next harvest, when the mower will be compelled to leave a large portion of the straw of the crop in the shape of stubble, behind him, by which the dunghill is robbed the next winter, and so a double or treble loss is sustained; all of which might be changed into a lasting benefit by the simplest means imaginable. On my route, I fell into conversation with a farmer, a Friend—who admitted the unsightly appearance on an oat field which we were examining, where thousands of these stalks were standing up all around, which had been dragged up by the heavy harrow, and on removing some of these we found spaces of eight or ten inches in diameter which had not a single blade of oats growing upon them; and many of these roots were standing at least a foot in height, with large masses of the soil attached to them, showing that about a foot of the straw must be left on those places at harvest in the shape of stubble—a dead loss to the farmer, as well as to the land. On inquiring of my friend why they were not removed from off the crop, he told me it was a labour that would not pay the expense; "I have known it done," said he, "and have myself put them into large heaps, and given them time to rot, and have carried abroad the decomposed mass, but never have I experienced the least benefit from such a dressing."

Now, I have it in my power to inform my adopted friends of a mode that will be of the utmost value to them in ridding the land of this incumbrance, which costs them at present about as much as the parson's demand in England, a tythe or tenth of the crop, and show them a way of converting this evil into at least as great a profit as it is now a loss.

All know the value of the ashes of vegetables as a manure, and how that when they are mixed with earth, they operate as leaven, leavening the whole lump. Now, if these corn stalks are gathered from off the land immediately after harvest, and are deposited on some rich bank of earth—say the headland of a field, &c., or if on meadow, the sward must first be removed, and upon this naked spot be heaped, first some brush wood, then bushes, grass, weeds, leaves, chips, decayed timber, old logs, &c. &c., intermingling corn stalks, the parings of bush land, grass clods cut from the sides of roads or the margins of rivers, with bog earth, &c. &c., building the mass round and compact in a conical shape, until the heap be, if you please, as large as a house, covering the whole at last with grass sods, and finishing with a thick covering from the rich bank of earth beneath, leaving an opening at the top to act as a chimney;—the mass might then be fired through the holes at bottom, which ought to be built with loose bricks,—these holes, serving as draught holes, by which equal combustion can be carried on and regulated as circumstances might require, are at length to be entirely closed, as well as the chimney, so that the combustion might be conducted as slow as possible, else much of the richest portion of the mass will be driven off and dissipated. This heap, consisting of thousands of bushels of ashes, if you please, must be protected from rain, which would wash the alkali from it, to its great injury; but if covered thickly with earth, it might be left uncovered during the whole winter, and in the spring, be turned over and well mixed; then, after a few days, it might be carried abroad—a mass of the richest compost, worth hundreds of dollars, created at little cost, *but a great deal of pleasure.* Let this operation be considered the clearing up of the premises for the year; and during every season of leisure, the materials might be collected and removed to the spot, preparatory for operation. The parings from the angles of the snake-fence, the more rough and weedy the better, will make a valuable addition to the heap; and if these are taken off during the hot weather, they will soon be dry and take the part of so much brush wood, for conducting the fire to different parts, as might be required.

The corn stalks should be collected, with all the earth adhering to them, as soon after harvest as leisure might serve, for they will then be found to contain much saccharine matter, which, after fermentation, will be easily dissipated by the winter rain; and the heap should be fired while all the articles are dry, as much more of the rough earth and rubbish can be mixed and burnt with it; thus adding exceedingly to the quantity of the ashes. According to this plan, every farmer's heap of ashes ought to be worth to him a great portion of his rent; one great item of value being, they are upon the spot, without expense, labour, or loss of time on carriage.

The carcasses of animals dying during the year, can be preserved for the purpose of combustion, by removing them to the place appointed to receive them, and covering them with a thick coat of lime, spreading a layer on the ground before placing them. Lime being antiseptive, this would add exceedingly to the value of the compost.

Here follows a table of the produce of ashes from the burning of one thousand pounds of the following woods and weeds, which shows at one glance, the striking and surprising superiority of the corn stalk for this purpose. And by another table is shown, that the yield of salt or alkali, is astonishingly great in its favour. After this, will our agricultural friends permit corn stalks to *rise up in judgment* against them on every crop that succeeds, to the loss of the land, and of their character as neat and cleanly managers. Vir.

April 20th, 1840.

Table of the produce in Ashes and Alkali, of 1000 lbs. of the following woods and weeds.

	Yield of Ashes.	Of Salt or Alkali.
Stalks of Corn	88.6	17.5
Sunflower	57.2	20.
Vine branches	34.0	5.5
Box	29.0	2.26
Sallow, or Willow	28.0	2.85
Elm	23.5	3.9
Oak	13.5	1.5
Aspen, or Poplar	12.2	0.74
Beech	5.8	1.27
Fir	3.4	0.45
Fern, in August	36.46	4.25
Wormwood	97.44	73.0
Fumitory	219.0	70.0

Would some of our practical friends calculate the quantity of corn stalks on an acre, burn them, *upon paper*, and find the quantity of ashes per acre, and the yield of alkali?—Ed.

"In the cultivation of France, I was greatly disappointed; the sword has scarcely even yet had time to be beaten into the ploughshare: the soldier finds it hard to stoop to the labour of the plough and the hoe, and seems disposed to leave this drudgery to the women."

For the Farmers' Cabinet.

On Breeding in and in.

Sir,—The remarks of your correspondent (p. 267 of Cabinet) on this subject, although chiefly applied to vegetables, induces me to transcribe from a very valuable work, "On the Science of Agriculture," by Joseph Hayward, some observations which seem to put the matter beyond controversy.

I am, your subscriber,

John Sneid.

Montgomery County, 25th April, 1840.

"A difference of opinion may always be expected to exist, as to form and colour that constitutes the *beauty* of animals, as well as vegetables, but it cannot be denied that the grand object of agriculture should be, a *profitable produce*. The mode of attaining this object, no doubt, will be determined in a great measure by peculiarity of situation and circumstances; but taking it for granted that every agriculturist must be desirous of *keeping up* the good qualities, if not of *improving* his stock, the only questions that can arise are,—What is an *improvement?* and what will produce *profit?* And, let this be determined as it may, *perfection* can only be obtained by a selection of breeders. If a greater or less size be required, stronger propensities or greater and more perfect health and vigour, the object must be obtained by selecting and pairing those males and females which possess in the greatest degree the requisite qualities, whether *crossing* be resorted to, or breeding *in and in*. When left to nature, this is always determined one way; those which are rendered the weakest, from whatever cause, are driven off, or down, by the strongest and most vigorous; and as all have to contend with the same climate, lodging and food, those possessing the best habits must always prevail, and consequently, the breed must be kept up to its greatest perfection. And in adherence to these principles —that which is the most congenial to the laws of *nature*, is the most *profitable*—is clearly established by practical demonstration.

It is well known that there are many farms, and many large districts that never do fatten their stock, and indeed are considered and found inadequate to it. And what other cause can be assigned for this, but that the stock are bred by continual crossing with males reared under advantages of superior lodging, food, and climate, to what such farms and districts naturally produce? As Sir John Sinclair observes, animals bred from the same family and selected for their peculiar propensities to fatten, have a large proportion of flesh, and but little bone; so on the contrary, animals bred from meagre females, living in a harsh climate and with a scanty supply of food, by crossing with males of the largest size, produced by superior food, and in a climate more congenial, have a large proportion of bone, and but little flesh, and possess withal a more delicate and precarious state of health. Any land whatever, that will furnish food enough to maintain two animals in a state for breeding, and with a climate and lodging requisite to sustain health and vigour, will be found equal to the fattening an animal that had been naturalised to it by breeding *in and in* for several generations. Every farm may be considered as having its peculiar advantages and disadvantages, compared with others; and profit can only arise from a skilful observance and management of these.

There does not exist a more mistaken notion, than that the stock of one farm may be kept equal to every other, by crossing and changing the animals and seeds only. It has been well observed, that 'nature provides every creature with a shelter from the storm.' If a male and female of any species of animal or plant, be bred under circumstances of a congenial climate, and a liberal supply of food, and afterwards placed in a situation where the climate is harsh, and the supply of food scanty, they must of necessity decline in flesh, and in health, and vigour; but their young, bred under those circumstances of privation, will acquire habits, and be reduced to a size more conformable: and these again breeding *in and in*, the habits of their progeny will still become better adapted, until by degrees they will become perfectly inured and naturalized, and capable of making the utmost return the farm is equal to, and at the least expense. But if, on the other hand, the breeder chooses to contend with, and oppose nature, and instead of submitting to her laws, he still persists in attempting to keep up the size, by a fresh supply of males and females from the original quarter, he inevitably must be subjected to the consequences of a want of health and vigour, and incur great hazard and extra expense. That the above principles equally govern the vegetable, as well as the animal world, has been demonstrated by Sir Joseph Banks, who says, that by repeatedly raising plants from the seeds grown on the spot, he has so naturalized to this climate vegetables that were natives of a warm climate, and which, on their first introduction into this country, could only be kept alive in conservatories, that they are now enabled to flourish in the open air, without artificial protection."

Again: "After a perfect stock has been obtained, how is it to be continued? This seems to be the grand question, and it only can be answered on the principles before ex

plained, viz. by duly attending to their qualities and habits, when selecting the breeders; and again, to the means by which these qualities and habits are sustained. If great size be the valuable quality, and the utmost which nature will admit of has been produced by an artificial climate and lodgings, and a selection of food, it must be obvious, that with the same climate, lodging and food, the same stock may be kept up by breeding *in and in*; but with a less congenial climate, lodging and food, the progeny of such animals must decline, and become less in size; and at the same time it might be observed, that under these circumstances, no *crossing* can keep up the size and properties. And again, if animals or vegetables, of whatever size, bred in a certain climate, and with certain lodging and food, can be furnished with a lodging, climate, and food, more congenial and nutritive, they may be increased and improved by breeding *in and in*."

Preservation and use of Roots.

The following remarks, which we copy from the American Farmer, are from Mr. John Barney, of Philadelphia, one of the most eminent graziers in the country.

I commenced two years ago to improve a large tract of land on the river Delaware, about three miles below my former residence, and if spared a little longer, intend spending most of my time there. I want to give you a few hints on my success in raising and manner of preserving and feeding the good Roots, the sugar beet in particular, mangel-wortzel and ruta baga. I succeeded in raising a large crop last season of all the three kinds, and fed them to a large number of cattle, sheep, and horses; they are incalculably valuable to all kinds of stock, judiciously fed. I use them as follows:—*Cut hay of the very best kind, oats in the sheaf*, the roots chopped *fine*, a small quantity of *Indian meal* and *oats* ground, two-thirds oats, and one-third Indian meal, or bran, a small proportion of pure water, just to make it *moist*. I preserved them in a large stone wall cellar, commencing as follows:—Provided a number of cart loads of sandy lime, placed it so as to be handy, placing my beets three tiers thick against the wall all round the cellar, between every stack of beets a little lime sand, and so on as high as a man could pack them, the middle of the cellar left for the turneps. I have been taking them out ever since the middle of December, from five to six bushels per day, and expect to do so till grass takes their place; as my *ewe sheep* begin to lamb, I expect my roots will allow me to increase the number per day. In warm weather, I open my cellar doors and windows, but am careful in having them closed in cold frosty nights. In this manner I have preserved my roots for several years, and I feel persuaded it is worthy of patronising. I wish you much success in your useful calling.

John Barney.

From the N. E. Farmer.

Cultivation.

Sir,—I have been a dependent farmer, standing in need of the avails of my fields for defraying the necessary expenses of the farm and family; therefore it has caused me to experiment (though not extensively,) more or less every year, and especially in ploughing, and that too in the commencement of my farming system. Deep ploughing, where the soil is thin, either naturally or made so by shallow ploughing and tillage, calls for 40 or 50 cords of manure to the acre, to prepare it to bring a good crop of corn. If a dry season ensues, and the manure is not incorporated with the soil, the plant suffers for the want of moisture, and the crop is light. The farmer in the country where his means are limited for making or procuring manure by purchase, can do justice to but a few acres; and therefore cannot raise one quarter of the grain or roots necessary for fattening their swine and beef cattle, and for family consumption. Of course he cannot meet the demands that will come against him, and consequently he must fall in arrears. Should he have one or two hundred acres of thin tillageable land, much of it must lie a number of years in a dormant, useless state, before he can, by ploughing and manuring, bring it into a state of fertility, which would require surplus funds to some considerable amount to carry on his business. "Necessity," with me, has been to some extent, "the mother of invention." This plan, therefore, I have adopted, and as rigidly as I have been able, have pursued the method of ploughing which I have stated in my communication to the committee of the Massachusetts Society on farms; that is, to make all the manure I can, plough deeper and deeper every year, accordingly as I can manure, and bring my lands in a steady progression up to a high state of cultivation. I would explain myself more fully by giving you a statement of the management of one lot of twelve acres, which had been ploughed shallow; being rather cold clayey land, as much so as any I have.

The first years after it came into my possession, it was almost useless to me. It had no sward and yielded no production of much value. The sight of this lot gave me pain every time I crossed it, though my neighbours would sometimes say to me they had

seen good crops on this ground for some years after it was cleared off. In the year 1837, I made up my mind to see what I could do with this dormant piece of land; I therefore stacked upon it some hay, peas, and straw; foddered them out on the land, drew on and spread twelve cords of manure to the acre, mostly compost, and in the spring of 1838, I ploughed it carefully to the depth of five inches, which brought up some yellowish dead loam. I then harrowed and planted it to corn about the 10th and 12th of May. It came up appearing rather sickly, being on this dead loam. I then had it plastered and hoed; and until the roots had reached the manure, it wore the same forbidding appearance that the lot had shown for years past. It was ploughed and hoed three times. It finally returned me fifty-eight bushels and some quarts to the acre. In the following spring of 1839, I sowed it to spring wheat and oats, after ploughing it six inches, which was an inch deeper than it was ploughed in sward. It gave me twenty bushels wheat and forty-five bushels oats to the acre. For the wheat on this land, the Committee of the Berkshire Agricultural Society gave me the first premium.

J. K. Lawton.

The Day for Labour, the Night for Rest.

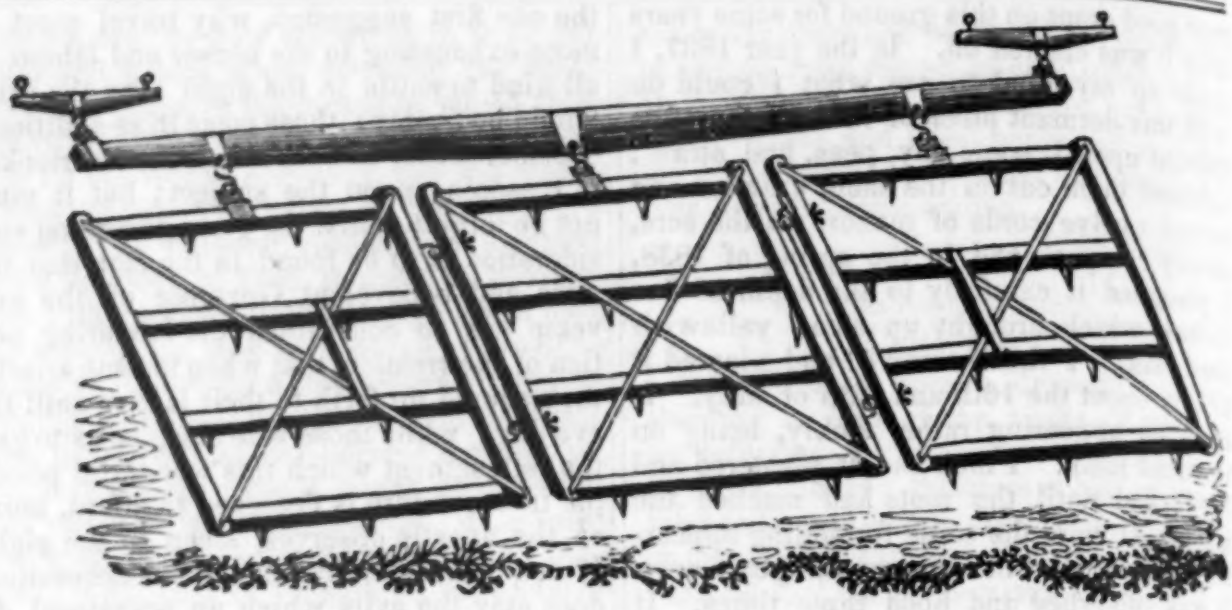
This is the arrangement of Providence, and our observance of it in its leading principles is essential to health of body, strength of mind, and the most perfect exercise of the moral faculties. I do not believe that an instance can be found where a wilful and long-continued departure from this principle has been indulged, and the transgressor not experienced some sensible inconvenience from it. It is no less important to the labouring part of animal creation than to man. I have many facts which I could produce as confirmation of this, but one among these will amply express the conviction of my own mind, as made up from personal observation. For a number of years I had occasion to travel considerably. I used my own horses. At first, if I had a long or hard day's ride to make, I was accustomed to rise quite early, and go on some distance, feeding my horse or breakfasting myself; but finding, as I supposed, that my horses suffered inconvenience, and perfectly confident that I did myself from this course, I changed my manner, gave my horses time to eat, took my own breakfast, drove probably faster, and made shorter stops, the result of which was, or I was unaccountably deceived, my horses would get through the service with less exhaustion, and I am sure that I experienced much less fatigue.

There are other reasons, I know, beside the one first suggested, why travel must be more exhausting to the horses and labour of all kind to cattle in the night than the same would be by day: these come in as additional considerations, and should not be overlooked in reasoning upon the subject; but it must not be forgotten that the great governing consideration is to be found in the fact that the wise and benevolent Governor of the universe has so constituted the labouring portion of the creation, that when the sun ariseth, they should go forth to their labour until the evening; while those who sleep so as to gain the refreshment which this wonderful principle in our nature is designed to afford, must, as the apostle observes, sleep in the night. If Jehovah, in accordance to our necessities, does stay the evils which an occasional departure from this order would naturally produce, we have no encouraging grounds to expect he will do it when these departures are habitual or consulted. Therefore it must be an act of ignorant or foolish presumption for any to expect the best success in any business, while the laws by which God directs the universe are disregarded. Apparent exceptions there may be to this observation; these, however, could the real causes of the exception be fully searched out, would be found to originate in other causes, and their existence not in the least possible degree to invalidate the general truth of the observation.

The laws of the physical, mental and moral world just as certainly bring poverty, in the wide sense of the expression, poverty in substance, bodily health, mental vigour and moral discernment, upon those who work unreasonably by night as upon those who sleep unreasonably by day; and there are as many considerations why persons should be regular in their hours of rest, as there are why they should be regular and fixed in their hours of business. The Maker of all has so planned his works, while the reason and experience of men both bear testimony to the general wisdom and goodness of such arrangements. —*N. E. Farmer.*

Dry rot may oftentimes be prevented in living trees if the wounds are carefully covered with a composition made of rosin, tallow, beeswax, and ochre, melted and mixed well together—and where it is necessary, for want of time in the spring, to resort to winter trimming, this method of prevention should be resorted to. It is cheap, simple, and adheres to the wood, excluding moisture, until it is healed over.

Every person who has any thing to do with cooking ought to know, that when water is once made to boil all that is further necessary, is just to keep it up to that temperature; any additional fuel added is wasted, for water heated in an ordinary culinary vessel, cannot be made more than boiling hot.



Compound Harrows.

These harrows are in general use in some of the agricultural districts in England, where they are highly approved. They are simple in their construction, and very durable. The usual size of each is three feet square; thus the three harrows cover a five turn ridge at wheat sowing, the horses passing along the open furrow on each side, by which the treading of the seeded land is prevented. The joints of the harrows permit them to operate on a concave, convex, or plain surface, with equal correctness, making better work than is possible with those of a different construction. If at any time an extra weight should be thought desirable, a piece of wood the length of the width of the harrows might be made fast across them, by which their efficacy would be much increased. By unscrewing the nuts, a pair, or one, or three single harrows, can be obtained in an instant. They are excellent for harrowing in all kinds of grain on land that is cleared, expediting the work, and performing much better than any other at present in use.—*Ed.*

Quick as Magic.

In the presence of seventy-eight persons in London, a parcel of rags were recently taken, made into paper, dried, and printed on, in five minutes! When this celerity becomes universal, loafers will have to dodge paper mills, or their ragged vestments will be whipped off and exhibited under their noses in the shape of a hand-bill, advertising them as vagrants before they know it!—*Western Farmer.*

The writer remembers the time when a pen of sheep were shown as candidates for a prize at a public exhibition in England, after which they were shorn, and the wool was scoured, carded, spun, died, made into cloth, cut and made into a coat, which was worn by one of the officers of the society at the public dinner-table on the same day!

For the Farmers' Cabinet.

Wine.

From the papers of the late Joseph Cooper

I think if my fellow-citizens would consider the great expense, risk, and uncertainty, of being supplied with wine from the usual source under the present prospect of affairs in Europe, and with what ease and trifling expense a wholesomer and better wine (if they would discard prejudice) may be made from the materials of our own country, they would use greater exertions for that purpose than heretofore: and as I have heard of many who have tried, and had their wine to spoil, I will give you a brief account of my method, which has always succeeded well.

I gather the fruit when dry and fully ripe, viz: currants, gooseberries, morella, cherries, (I make no doubt but the common red pie cherries would do as well, but have not tried them,) mash them and extract the juice, using as little water as is really necessary for that purpose; then add sugar to the juice till it is agreeable to the palate. I find a pound or a pound and a half is sufficient for the tartest fruit; when the sugar is dissolved put it in a clean sweet cask for fermentation, filling it up two or three times a day, till it discharges a clear froth, then check the fermentation gradually by putting the bung in slack; when the fermentation has nearly subsided, rack it off into a clean cask, or return it into the same, after rinsing it well with gravel, or something with the water to scour off the yeast which adheres to the inside. Before the liquor is put in, I burn a sulphur match in the cask; then put in it one or one and a half pints good apple or French brandy to a gallon, the former is the best. In about a month it should be racked as before, and repeated several times in a year; and if it is let dribble slowly each time of racking it will facilitate its age, as its passing through the atmosphere gives an opportunity of evaporation.

Lime—Ruffin on Calcareous Manures.

Mr. Coleman—Sir,—I have perused with very great interest your weekly reports of the agricultural meetings during the session of the legislature; and as most of the gentlemen that have spoken upon the subject of agriculture are practical farmers, their experience is of great value to the farming interests generally. They pursue some different courses, and have different views in the cultivation of their corn and other crops, but upon the whole it will have a good effect, and excite to inquiry and investigation many farmers, and stimulate them to step aside from the old beaten track they and their fathers have pursued, and imitate the courses pointed out at your meetings.

Upon the use of lime, there seems to be much difference of opinion. In my own vicinity, within four years past, there has been much money expended in the purchase of lime for agricultural purposes, at from $2 50 to $3 per cask for Thomaston lime: it has been applied in various ways, and as far as my knowledge extends, no one can tell whether he has derived any advantage from it or not. They have not been careful to *make* and *note* experiments, but in true Yankee style, *guess* it is good as a manure. Some farmers have applied it to their growing wheat, and have raised good crops, which was mostly attributed to the lime: others have grown equally as large without it. Dr. Jackson, I believe, thinks it of great importance in agriculture. Dr. Dana says, "a bushel of ashes is equal to a cask of lime." B. V. French, Esq., in his remarks upon the cultivation of wheat, at the eighth agricultutural meeting, stated that he used 150 bushels lime per acre; his own experience was unfavourable to it, and some others had not derived much if any advantage from its use.

So also the Berkshire marls have not proved so beneficial as was anticipated, from the great amount of carbonate of lime they contain.

I have lately had the perusal of a work on the calcareous manures of Virginia, by E. Ruffin, Esq., who after many years' experience, and with the most careful, accurate and numerous experiments, has proved, I think beyond all question, their great value in agriculture; and as the shell marls of Virginia, the Berkshire marls and the lime from the state of Maine, are almost the same thing, that is, the carbonate of lime, I can conceive of no possible reason why lime and marl may not be as useful and as profitably employed in Massachusetts as in Europe or Virginia or New Jersey. But I think every farmer who purposes to use lime or marl, should procure Ruffin's Essay on Calcareous Manures, and carefully peruse and study the work, which will enable him to apply his labour and means more understandingly. There are, without doubt, many soils upon which lime would be of but little or no use, but if there is any reliance to be placed upon chemistry, it must be of much use upon soils containing oxide of iron and sulphur, as the lime will combine with the sulphate of the iron, and form the sulphate of lime, or gypsum. It may be equally useful upon *acid* soils, or such as grow sorrel and pine luxuriantly.—*N. E. Farmer.* B.

March 30th, 1840.

Every Thing in its Place.

But this cannot be practised unless a place be provided for every thing. When a man takes possession of particular premises, he should make a general then a particular survey of the various implements which are on hand, and the conveniencies afforded for the disposal of them. This done, he should determine upon the place which each article shall occupy; and if there are many persons in the family, some designation should be made, so that no mistake be made about it. When this is done, then he should himself be very particular not to transgress his own arrangement, and that others shall not do it. The axes, the shovels, the iron bar, hoes, rakes, baskets, wheelbarrow, each, every one, and all, should have its hook, nail, location, and when not in use, kept there. It may sometimes be thought unnecessary to be so particular. It may be supposed just as well to leave them where you expect to use them next; but before this *next time* comes, you may alter your plan, or some other of the family may have occasion for them, and you at the moment be out of the way; or you may have forgotten; then comes the inquiry, the hunt, the general wonder where the article can be; then follow mutual suspicions that each other has been in the fault; next, recrimination; then evil surmises that some neighbour has without leave *borrowed* it, and neglected or forgotten to return it; and in the end, besides all the excitement, recrimination, and evil surmising, twice the time and labour is lost in searching that would have been required to put the article in its place at first. I have presented no overdrawn representation here: all and more than all of the evils above numbered, I have known many times to have grown substantially out of what many would think hardly worth a notice. A hoe or some other utensil had been left where it was last used instead of being put in its proper place, and a whole family set in confusion thereby. How serious then

must be the inconveniences, how many the excitements in those families where nothing has a place, or where if things have their places, the members are negligent about putting them there.—*New England Farmer.*

Order and Regularity.

The patriotism of men may be doubted, (or at least their state pride questioned,) who have no order, taste, nor convenience, about their homes. Men cannot be happy, (at least married men,) whose families are subject to perpetual change of residence. Females are not likely to form attachments to their homes, without something to ornament and adorn it, which may be rendered doubly dear by their assistance in that decoration. Hence, until the people of Mississippi look on their residences with that soul-cheering emotion inspired by the poet, of "home, sweet home," —in vain may we look forward to permanent improvement, from the efforts now on foot in the state, through the state and county agricultural associations. In travelling through the country, you are forcibly reminded, at almost every plantation by the way, of the commendable enterprise and industry every where to be met with, and yet equally impressed with the reflection, that apart from the wide-spread cotton fields and gin houses, that the inhabitants are but the tenants of a day. But few farmers present to the eye of the traveller the neat country cottage, partly hid by the ornamental shrubbery surrounding it, with the apple, the peach, and other necessary fruit trees, "standing in bold relief," feasting the eye and the appetite. Though this part of the culture may not be a source of much profit to the owner, yet it may well be questioned whether without it there can be those endearments to our homes that follow with it; will not the family ties be strengthened by that which may be the joint care of all its members?—our daughters pointing to the woodbine, the honeysuckle, the jessamine, and other vines which they have trained; and our sons to the "trees they planted." If the education of our sons as farmers be desirable, may it not with propriety be asked, how there can be a plan better calculated to teach the "young idea how to shoot?" How essential then, that order and good taste should surround the dwelling, either in ornamental or vegetable culture! Whether we intend them for farmers or for professional life, is it not more likely that being thus surrounded, their minds will become better systematized, than when confusion, or no order at all prevails?

"Train up a child in the way he should go, and when he is old he will not depart from it." Train them up as farmers, and whether we are fond of the ornamental, or the more profitable portions of culture, let order and good taste abound—thereby laying the foundation of a proper system of education for the young farmer.—*Mississippi Farmer.*

To the Editor of the Farmers' Cabinet.

A word for Morus Multicaulis.

Sir,—Now, that the multicaulis *fever* has passed, and we are *shivering* under its effects, it would be well for us to look abroad and ascertain what has been the real cause of the dire disaster that has overspread the land like a funeral *pall*, *chilling* the very heart-blood of those, who a year ago were rioting in the unnatural excitement which had so unaccountably pervaded all ranks of people, from the highest even to the lowest. And all this has taken place within the memory of the great Merino mania, which seems to have raged in this country with more fury than in any other quarter of the globe. Indeed, I think I could point out more than one individual who has suffered from the gripe of both these monsters—so that the proverb, "forewarned, forearmed," is not always correct.

Now there never has been the slightest falling away in the promises which were made by the morus multicaulis any more than in those of the Merino sheep; they were both perfectly adapted to the end for which they were designed, and will continue to hold their ground in spite of the *chills* and *fevers* of the tens of thousands who are now suffering for their own folly. Fine wool and silk are still as valuable as ever, and are still in request in those countries "where the people stand too thick for the free use of the plough;" but in this glorious hemisphere, where the people can walk upright in the fear of God, but not of man, they will not, for a great many years to come, consent to bend their backs, and become an emaciated race of silk manufacturers, who are proverbial for deformity of body and imbecility of mind, fit slaves for a monarchial government. And let any one who has passed through the silk-growing countries of Europe of late, bear witness to the correctness of the picture here drawn. The fact is, people ought not to forget that there are other things of importance in the range of our *necessities*, besides fine wool and silk. There is not—there never was a doubt that silk garments can be made in this country—and I should like to be told what there is that cannot be made in this land of *light and liberty*? but while the people can do better—while there are mil-

lions of acres of land to clear and cultivate; hundreds of cities to found; thousands of miles of roads to form and carry; and canals like net-work to dig over the face of the wilderness; and while the cry of "westward ho!" is ringing in our ears, who will, who can, sit down for fourteen or sixteen hours a day, in a space about six feet square, breathing the disgusting animal effluvia floating in the confined atmosphere of a small and close room, and choking their lungs with the deleterious matter? I say, who *will*, who *can*, who *ought*, thus to debase his powers, both of body and mind?

The morus multicaulis has proved itself all that its most sanguine advocates ever promised for it—nay more—for in consequence of the failure of the speculation, millions of trees have been left in the open ground for the past winter, and have withstood its rigours, to the admiration even of its adversaries—all confess themselves surprised at the result. It is one of the most beautiful trees that is cultivated; flourishes in any soil or situation; is quick in growth, and most easily raised in the greatest numbers; comes beautifully into leaf, and remains long in foliage in the autumn; would form in a very short time an impervious shade around the dwelling, and especially about the dairy; is elegant in its appearance, cleanly in its habits, being remarkably free from blight or canker, and has been *cracked up* as good for every thing—*food*, *drink*, and *clothing*—firing excepted, to which, however, it is now devoted with a recklessness without a parallel—If we could forget the time when Merino sheep were sold at twenty-five cents a dozen, and were killed by hundreds as food for hogs! Many persons who were on the point of making their fortunes regret that the rabid state of the public mind did not continue for one more year; this is natural, but the evil would then have been greater; *more* agriculturists would have been induced to mortgage their farms, to put the money into the morus speculation, and the misery would then have been extended a hundred fold. I have a person in my eye who, the last year, rented a field in the sands of Jersey, at twenty dollars an acre, and put upon it seven hundred dollars worth of manure, and planted morus trees upon it for one year only! the crop is still in the ground, and has withstood the winter admirably; and I thought the worst of it was that the trees still stand there—no, the owner thinks the worst of it is, that he has a hundred and forty thousand in another patch!

Now, the evil has been occasioned by the madness of speculation, with which the people of our country are so liable to be affected. Instead of permitting those to whom such a business would be proper and legitimate, to cultivate the morus, and receive a fair remuneration for their labour, every one must rush into the thick of it—merchants, traders, lawyers, physicians, and even ministers of the gospel, all fearing that the cultivators of the soil would deprive them of their share of the golden harvest—all travelled out of the record, and were all nonsuited!

Such a state of things is to be deplored; and yet, but for this spirit of speculation which seems to have been implanted in us for wise purposes, how would it have been possible for us to do in half a century what else would have been the labour of centuries? let any one look back but twenty years, and see what has been accomplished in that time, to the astonishment of the whole world, and say if these wonders could have been wrought without a spirit of speculation—I had almost said, of *reckless* speculation? I know that many point to the enormous debt due for internal improvements as an incubus on the state—I confess I am not one of these—the people of this generation have done gloriously in expending that sum for the benefit of future generations, and to them it is but fair to turn over a large share of it for liquidation.

To me it appears, that our country, in its present deranged state of affairs may be likened to a ship that has been going before wind and tide at the rate of fourteen knots, brought up suddenly to a tack—she is at present in *stays*—in a little time, however, she will get a slant of wind, and will start away with the swiftness of an arrow—it is but to carry a *leetle* less sail for the future, and all will be the better for thus having been *brought up*.

I perfectly agree with you, that the present disastrous state of the times, by which so many are forced from the ranks of citizens into the country, will form an era in agriculture, which will redound to the glory, honour, and welfare of our beloved country—I cite myself as an instance, and have been induced to take pen in hand by the observations on this subject contained in your editorial address, page 266 of the Cabinet for the present month.

I subscribe myself one of the citizen agriculturists. Respectfully,

JOSHUA GRANT,
Late of Baltimore.

April 29, 1840.

"In the preservation of seeds, grain, and vegetables, infinitely more pains are taken to preserve the varieties distinct and unadulterated than with us. In the *mountains* of Scotland there are certain districts appropriated solely to garden seeds, and no two varieties that are in danger of becoming adulterated by being placed near each other, are allowed to be cultivated in the same district."

At a meeting of the Philadelphia Agricultural Society, held May 5th, 1840, the following resolution was agreed to, viz:

Resolved, That the Farmers' Cabinet, published in this city, and edited by James Pedder, a member of this society, merits our decided approbation, inasmuch as it is a means of diffusing much valuable information amongst the agriculturists of our country; and also,

Resolved, That this society being desirous of extending its patronage to said periodical, pledge its exertions to procure and present communications for publication in its columns.

The quantity of rain which fell during the 4th month, April, ... 6.827 inches.

JOHN CONRAD.

Pennsylvania Hospital, 5th mo. 1, 1840.

☞This being the first number of the "Farmers' Cabinet" published entirely under our control, it will be sent, as a sample of the work, to some who are not subscribers, but who are supposed to be interested in the subjects on which it treats.

Notice to Correspondents.

"I. Yeates" will find his wishes anticipated.

"Subscriber's" inquiries will be answered in our farther progress. A description of the Plough will be found at page 163, vol. 3 of Cabinet.

"A. C. Ridgway" directs the leaves of the skunk cabbage to be placed at the distance of six or seven rows of the corn, to preserve it from the cut worm.

"A. W.'s" suggestions are good.

"R. C.'s" offer is accepted.

"B." must excuse us; we shall be glad to hear from him on subjects immediately connected with our work.

"Y." in our next.

"Agricola's" excellent paper "On the Analysis of Limestone," was read before the Agricultural Society of Philadelphia, and handed for publication in the "Farmers' Cabinet."

All communications should be sent in, post paid, before the first of the month.

To Post Masters.

To the liberality of the Post Office department the science of agriculture is greatly indebted. For a *single cent*, our publication is enabled to make its way through a circle, two hundred miles in diameter, while for half a cent additional it is conveyed to the farthest point of the Union, we trust to be read by many thousands, and to communicate to them the experience of their agricultural brethren throughout the land.

To the POST MASTERS of the several stations we look, as amongst the immediate friends of our work, in carrying out the liberal designs of the department, by consenting to act as agents in distributing information, which will, we believe, prove of more real importance to our country than that of all the other sciences combined—teaching *the art of making Bread*. We presume that many of these are themselves now practically engaged in this most useful occupation; while all must feel vitally interested in the success of a work which professes to be a vehicle by which persons from one end of the Union to the other might become acquainted with the success of their brethren in that honourable, that noble employment. May we bespeak their kind offices in dispensing the "Farmers' Cabinet," and will they credit us with the assurance, that nothing will be wanting on our part, so far as our ability extends, to make it a work worthy their best regards.

To Subscribers.

The embellishments of the present number are fair specimens of our intentions in that line. The cow, "MISS POINTS," is the first of a series of Portraits of the Durham short horns, which we trust we shall be enabled, by our subscription list, to continue to present to our friends periodically. The next number will contain the portrait of a bull of that fine breed; and it is intended to follow the same course of publication with the horse, in its different and distinct breeds; the sheep, the hog, &c., trusting that we shall receive such encouragement as will enable us to do justice to the work upon which we have entered; it being our wish to render the "Farmers' Cabinet" worthy the support of the state and country.

As the Publishers and Editor intend to spare no reasonable exertion to render the Cabinet a standard work of reference, they would recommend that on the receipt of the numbers they should be stitched and carefully cut open, so as to preserve them in suitable condition for binding at the end of each year; when, if returned to the publishers, in good order, they will be neatly and substantially half-bound and lettered at twenty-five cents per volume, of twelve numbers each. Copies of the first, second, and third volumes may yet be had at one dollar per volume, in numbers, or one dollar and twenty-five cents half bound. They may be forwarded by mail in numbers at newspaper postage, but the bound volumes cannot be sent by mail.

We refer our friends to the terms of subscription stated below.

Philadelphia, 5th mo. 15, 1840.

THE FARMERS' CABINET,

IS PUBLISHED BY

KIMBER & SHARPLESS, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is edited by JAMES PEDDER, and is issued on the fifteenth of each month, in numbers of thirty-two octavo pages each, printed on good paper and new type. The subjects will be illustrated by engravings, whenever they can be appropriately introduced. TERMS.—*One dollar per annum, payable in advance.* By the decision of the Post Master General, the "Cabinet," is subject only to *newspaper postage;* that is one cent on each number within the state, or within one hundred miles of the place of publication out of the state,—and one cent and a half on each number to any other part of the United States—and Post Masters are at liberty to receive subscriptions, and forward them to the Publishers under their frank—thus affording an opportunity for all who wish the work, to order and pay for it without expense of postage.

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